SOLDIERS OF END-TIMES

Assessing the Military Effectiveness of the Islamic State

Ido Levy

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Cover image: Islamic State fighters attacking Iraqi military positions, https://jihadology.net/2017/05/05/new-video-message-from-the-islamic-state-revival-of-the-battalions-wilayat-al-furat/.

For all Americans who served in Iraq
and Syria and stood with our allies against
one of the greatest evils of our time.

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Abbreviations

ADF	Allied Democratic Forces
AFP	Armed Forces of the Philippines
APC	armored personnel carrier
AQAP	al-Qaeda in the Arabian Peninsula
AQI	al-Qaeda in Iraq
AQIM	al-Qaeda in the Islamic Maghreb
ASG	Abu Sayyaf Group
ASL	Ansar al-Sharia in Libya
AST	Ansar al-Sharia in Tunisia
ASWJ	Ahlu Sunna wa Jamaah
ATGM	antitank guided missile
BIFF	Bangsamoro Islamic Freedom Fighters
CTS	Counter Terrorism Service
DRC	Democratic Republic of the Congo
EFP	explosively formed penetrator
EOD	explosive ordnance disposal
ERD	Emergency Response Division
FedPol	Federal Police
FSA	Free Syrian Army
GNA	Government of National Accord
GTD	Global Terrorism Database
IDP	internally displaced person
IED	improvised explosive device
IS	Islamic State
ISF	Iraqi security forces
ISI	Islamic State of Iraq
ISIS	Islamic State of Iraq and al-Sham
IS-K	Islamic State–Khorasan
ISOF	Iraqi Special Operations Forces

ISS	Islamic State in Somalia
ISWA	Islamic State West Africa
JTAC	joint terminal attack controller
KBL	Katibat al-Battar al-Libiyah
LNA	Libyan National Army
MNLA	National Movement for the Liberation of the Azawad
PKK	Kurdistan Workers Party
PMF	Popular Mobilization Forces
PYD	Democratic Union Party
RPG	rocket-propelled grenade
SAC	Special Action Company in SAF
SAF	Special Action Force
SDF	Syrian Democratic Forces
SOF	U.S. Special Operations Forces
SOHR	Syrian Observatory for Human Rights
SVBIED	suicide vehicle–borne improvised explosive device
TOC	tactical operations center
UAV	unmanned aerial vehicle
VBIED	vehicle-borne improvised explosive device
YPG	People's Defense Units
YPJ	Women's Protection Units

Introduction

In 2014, the jihadist group known as the Islamic State (IS) swept across Iraq and Syria and took over territory about the size of Britain. At its height, IS controlled approximately 11 million people[1] and boasted an annual revenue of almost $2 billion from taxation, oil, looting, and criminal activity,[2] with its territories producing up to fifty thousand barrels of oil per day.[3] An organized bureaucracy administered a variety of services within the territory, including education, waste management, real estate, and agriculture.[4] IS brought the global jihadist movement to a new zenith, achieving a level of territorial control unattainable for most nonstate actors.

Most astonishingly, the Islamic State overcame the well-armed Iraqi and Syrian militaries on the battlefield to capture its territory. IS then fortified its holdings and offered heavy resistance when its adversaries stemmed the group's advance and entered a long campaign of retaking their lost territories. Indeed, the Iraqi military and Kurdish Peshmerga proved unable to make any real progress against IS until the entrance of U.S. airpower in 2014. In Syria, the IS onslaught ground to a halt in 2015 as outside forces, most notably Russia and Iran, increased their support for dictator Bashar al-Assad. Overall, the war against the Islamic State's territorial caliphate raged from 2013 to 2019, causing the destruction of entire cities, the killing

or wounding of countless people, and the displacement of millions. (IS continues to wage an insurgency, though it is now deprived of its former territories.) The group's achievements against its better-armed foes required a degree of proficiency in conventional warfare that is typically ascribed only to established state actors. Thus, the extraordinary success of the Islamic State is puzzling.

This study examines the Islamic State's military operations to illuminate the sources of its military effectiveness, with the aim of deriving lessons for countering the group. Chapter 1 reviews historical patterns in jihadist conventional warfare campaigns from 1979, when the mujahedin resistance against the Soviet invasion of Afghanistan began, to 2014, when IS declared the caliphate. Chapter 2 identifies the primary ideological motivation for conventionalizing the Islamic State, as well as four factors that informed the group's military effectiveness—its organizational innovation, its "shaping" operations to weaken adversaries, the will to fight, and its focus on holding the initiative. The four sections of chapter 3 explore these factors through in-depth case studies of the following IS campaigns:

- The Ramadi offensive (January 2014–May 2015)
- The Kobane offensive (September 2014–March 2015)
- The defense of Mosul (October 2016–July 2017)
- The defense of Baghuz (February–March 2019)

Chapter 4 then argues that the organizational development of IS was the source of its conventional warfare capabilities. Although it considers two alternative sources of military effectiveness, the chapter concludes that the group's success derived from its organizational development. Chapter 5 analyzes the major military campaigns of the Islamic State's affiliate groups in its *wilayat*—or "provinces"—outside Iraq and Syria, comparing their performance with that of the core organization.[5] Chapter 6 considers the Islamic State's various military campaigns and unique fighting style as a "way of war," or preferred warfighting method, in their own right. Chapter 7 concludes with possible lessons learned for U.S. operations conducted "by, with, and through" partner forces and also offers policy implications.

This study offers several key findings:

- High will to fight was a decisive factor in the Islamic State's conventional warfare style. Likewise, IS quickly eroded the willpower of its adversaries with sharp, fast-paced attacks, preferably with the advantage of surprise. Chief among such attacks were those involving suicide car bombs (suicide vehicle–borne improvised explosive devices, or SVBIEDs), whose main benefit was their shock effect. IS also conducted attritional shaping of adversaries to demoralize targets before engaging them in battle. These activities were key to widening the morale and motivation differential in favor of the Islamic State. The greater the morale and motivation differential between IS and its adversaries, the more successful IS was.

- IS was frequently successful on the offensive because it could choose where and when to attack, and could employ its preferred warfighting method under conditions where it held the initiative.

- IS achieved only modest successes and suffered major defeats on the defensive. Without the ability to choose the battlefield and weaken an adversary before engaging, IS relied heavily on the high determination and uneven tactical proficiency of its fighters. IS also drew on its innovative organizational capacity to build formidable defenses and evade adversaries' airpower and superior firepower. Brutal counterattacks led by SVBIEDs became the defining characteristic of IS attempts to regain the initiative and demoralize its adversaries while on the defensive. With the group's adversaries benefiting from heavy U.S. air support, however, it was only a matter of time before IS lost all of its territories.

- The organizational development experienced by the Islamic State since 2003 was the primary source of the group's military effectiveness. Certain organizational innovations enabled IS to operate on a larger scale more appropriate for conventional warfare. Supplementing these innovations was an influx of foreign fighters, particularly Chechens

and other Russian-speaking fighters, a major force multiplier for the Islamic State's military capabilities.

- IS *wilayat* generally made greater efforts to conventionalize after pledging allegiance to the group. They also fought more effectively as their styles of warfare converged with that of IS in Iraq and Syria. This is further evidence that the Islamic State's apocalyptic jihadist ideology leads to increased conventionalization. Because this ideology calls for the immediate reestablishment and expansion of the Caliphate in anticipation of an imminent apocalyptic war against "nonbelievers," any group seeking to join IS must show that it can capture and hold territory. Despite the limited success of some *wilayat*, virtually all made efforts to conventionalize.

- Low-tech disruptive innovation is a key characteristic of the Islamic State's model of conventionalization, with up-armored SVBIEDs, pickup truck–based technicals, and highly motivated light infantry forming the backbone of its rapid attack capabilities.

From the perspective of the United States, the war against IS—Operation Inherent Resolve to the U.S. military—was a successful military operation conducted "by, with, and through" U.S. partner forces in Iraq and Syria. The Iraqi security forces (ISF) and the Syrian Kurdish–dominated Syrian Democratic Forces (SDF, comprising the People's Defense Units and the Women's Protection Units, or YPG and YPJ, respectively) fought the bulk of the ground war against IS. The United States and its allies, under the Global Coalition to Defeat ISIS, provided the ISF and SDF with air, fire, training, logistical, and advisory support, as well as limited ground accompaniment. The synergy between the coalition and partner forces was crucial to defeating IS and holds lessons for future "by, with, and through" efforts:

- The Islamic State's high capacity for military innovation necessitated heavy coalition air and fire support for the less innovative partner forces. IS innovation stemmed from its adaptable leadership, ideology,

willingness to sustain casualties, and decades of experience fighting superior adversaries. While air and fire support compensated for the innovation gap in the short term, the United States should try to foster innovation among its partners by providing risk-mitigating support and encouraging use of new tactics through training and advice.

- Long-term relationships are key to the success and sustainability of "by, with, and through" partnerships. Sustained commitment to a relationship with partner forces, even through periods of relative calm, garners trust among all parties and supports growth for partner forces while facilitating quick responses to crises. This approach is also the only way for the United States to foster true partner force commitment to U.S. interests, as motivations for fighting become intertwined with robust interpersonal relationships among U.S. and partner personnel. The Iraqi Counter Terrorism Service (CTS), which had been working closely with U.S. Special Operations Forces since 2003, exemplifies this type of relationship. Thus, the United States should aim to maintain and improve its relationships with the ISF and SDF through sustained cooperation and at least modest contingents of troops on the ground. Such a strategy does not require large ground commitments and has great potential for outsize gains.

- The will to fight is a critical issue when working with partner forces. Even with materiel support from the coalition, the SDF and much of the ISF often required substantial coalition air- and firepower to advance against IS. The only consistently dependable partner was CTS's special operations forces division, an elite unit within the ISF. The lack of determined personnel led to considerable problems in coordination, tempo, mass, sustainment, and other areas. Such problems underscore the importance of long-term relationships for garnering genuine commitment to the fight against a shared adversary.

The remainder of this introduction describes the data and terminology used in the study. Research materials included numerous open-source

reports by expert analysts, scholars, and journalists, as well as primary sources, among them documents, videos, and audio recordings published by IS and other jihadist groups. Primary source material was retrieved mostly from Aaron Zelin's Jihadology website,[6] the blog of Aymenn Jawad Al-Tamimi,[7] and the West Point Combating Terrorism Center's Harmony Program documents archive.[8] Research also included more than sixty interviews conducted with experts, journalists, and current and former U.S. military officers, a significant number of whom served as U.S. Special Operations Forces. Interviews were semi-structured, with questions geared toward interviewees' experiences and areas of expertise. The interview program ran from October 2020 to April 2021.

The focus of this study is the Islamic State's performance in conventional warfare rather than in terrorism or insurgency/guerrilla warfare. "Conventional warfare" is understood to mean armed conflict involving overt efforts to capture and hold territory. The term "conventionalization" is used to refer to the process whereby an armed actor adapts its forces and methods to those required by conventional warfare. This process may entail, for instance, a reorientation of tactics toward capturing territory or using weapons in a conventional manner.

Terrorism and insurgency/guerrilla warfare are treated as distinct from conventional warfare. Per Bruce Hoffman's definition, terrorism is viewed as "the deliberate creation and exploitation of fear through violence or the threat of violence in the pursuit of political change."[9] Insurgency/guerrilla warfare often includes terrorism, such as attacks on civilians, though it also entails embedding in local populations and conducting sustained strikes on state security services in an effort to overthrow a ruling power. These activities are generally executed covertly to avoid confrontation with better-armed adversaries. Conventionalizing groups such as IS usually employ terrorist and insurgent/guerrilla tactics to support their military operations.

For this study, the most important distinction among these modes of warfare is their relationship to territory. Conventional military forces capture and hold territory openly, usually with the goal of governing the controlled area. Terrorists and insurgents do not attempt to hold or capture terrain, but rather target security services to weaken them, win over local populations,

scare away brittle adversaries, and create shadow governments. Such groups may exert some influence over territory through covert activities among local populations, but they generally do not operate overtly or mass their forces, usually in an effort to avoid exposing themselves to more powerful adversaries. In some instances, the term "semi-conventional" is used to refer to actors that have partial control over a disputed territory and employ a combination of terrorist, insurgent, and conventional methods to secure it.

The terms *jihad* and *jihadist* are frequently used to refer to the goals, ideologies, and members of IS and like-minded organizations. While *jihad* (literally "struggle" in Arabic) can have many meanings, both violent and nonviolent, the term in this study specifically refers to "the employment of holy war to realize the perceived political goals of Islam"—that is, mainly, the restoration, expansion, and defense of the Islamic empire (or "Caliphate)" and the implementation of sharia (Islamic law).[10] IS and like-minded groups glorify violence and refer to their members as jihadists (or mujahedin); thus, the term as used in this study aims to reflect the character of those groups as accurately as possible. The jihadist label also serves to differentiate violent Islamist groups from the vast majority of Muslims, who do not endorse violence or extremist ideologies.

Finally, this study focuses exclusively on armed groups claiming adherence to Sunni Islam (al-Qaeda, the Islamic State, and the Taliban, among others), as opposed to Shia Islam, within which there exists a separate jihadist current led by Iran and its proxy groups (including Hezbollah, the Houthis, and others). Shia jihadists endorse violence and extremist interpretations of Islam just as Sunni jihadists do, but there exist fundamental theological differences between the two branches that put them in open conflict with each other. Thus, Shia jihadists have developed largely separately from Sunni jihadists—including in their patterns of conventionalization—a phenomenon that warrants further research.

Notes

1 Andrew Mumford, *The West's War Against Islamic State: Operation Inherent Resolve in Syria and Iraq* (London: Bloomsbury Publishing, 2021), 1.

2 Stefan Heißner et al., *Caliphate in Decline: An Estimate of Islamic State's Financial Fortunes* (London: International Centre for the Study of Radicalisation and Political Violence, 2017), 3, https://icsr.info/wp-content/uploads/2017/02/ICSR-Report-Caliphate-in-Decline-An-Estimate-of-Islamic-States-Financial-Fortunes.pdf.

3 Erika Solomon, Robin Kwong, and Steven Bernard, "Inside Isis Inc.: The Journey of a Barrel of Oil," *Financial Times*, February 29, 2016, https://ig.ft.com/sites/2015/isis-oil/.

4 For more details on IS governance activity, see George Washington University's ISIS Files project at https://isisfiles.gwu.edu/.

5 IS uses the term *wilayat* to refer to any of its designated provinces in its "caliphate," whether in Iraq and Syria or elsewhere. For the purposes of this study, the term is generally used to refer to groups affiliated with IS outside of its core territories in Iraq and Syria.

6 See https://jihadology.net/.

7 See https://www.aymennjawad.org/.

8 See https://www.ctc.usma.edu/harmony-program/.

9 The definitions of terrorism and insurgency/guerrilla warfare are hotly debated. This study does not seek to address this debate. See Bruce Hoffman, *Inside Terrorism* (New York: Columbia University Press, 2017), 40.

10 Ido Levy, "Toward Understanding the Actions of the Islamic State and Other Jihadist Groups as Military Doctrine," *Small Wars Journal*, January 24, 2019, https://smallwarsjournal.com/jrnl/art/toward-understanding-actions-islamic-state-and-other-jihadist-groups-military-doctrine.

1

Sunni Jihadist Armies Before 2014

History is replete with examples of irregular forces or guerrillas turning to conventional methods to reach their goals, such as Mao Zedong's forces during the Chinese Civil War. For jihadists, the astonishing rise of the Islamic State marked the culmination of a conventionalizing process that began with the Taliban's efforts to replace the Afghan state with an Islamic emirate in the 1990s. The Taliban grew out of the mujahedin, a coalition of Afghan Islamist militias that rose in the late 1970s and 1980s to overthrow the Afghan communist government and oust the Soviet forces that had arrived to support it. The mujahedin conducted guerrilla-style operations, relying on ambushes, hit-and-run tactics, and raids by small units. The Soviet army, a huge conventional force unprepared for counterinsurgency, responded by deploying special forces and ample airpower alongside regular soldiers to train, advise, and assist Afghan government troops.[1] The United States would later respond in a remarkably similar fashion to jihadists in Afghanistan, Iraq, and elsewhere.

Where It Began: The Mujahedin and Taliban

In the jihadists' first brush with airpower, the mujahedin encountered aggressive carpet-bombing and heliborne attacks to which they had no adequate response until they began receiving Stinger man-portable air-defense systems from the United States.[2] The Soviets made particularly

liberal use of helicopters to interdict mujahedin supply routes and terrorize the civilian population. In response, the mujahedin developed camouflage tactics, quickly covering themselves with earth-colored cloaks when they heard approaching helicopters and leveraging mountainous terrain to improve concealment.[3] Additionally, the mujahedin learned to use heavy machine guns and SA-7 shoulder-fired missile launchers to blunt Soviet airpower, downing scores of aircraft and forcing Soviet pilots to fly at higher altitudes, where they were less effective. Such adaptations enabled the mujahedin to repeatedly inflict heavy casualties on Soviet and Afghan government forces, an early indication of conventionalization.[4] The United States in 1986 had begun providing Stingers to the mujahedin, preparing the latter to deliver the decisive blow thereafter; downing nearly 270 Soviet helicopters, the mujahedin achieved an air defense capability that has remained unmatched in jihadist military history and played an important role in the Soviets' decision to withdraw in 1989.[5]

The ensuing Afghan civil war would see the Taliban rise from the mujahedin as the first jihadist conventional army, determined to establish an "emirate" governed by sharia in Afghanistan. Armed with captured Soviet equipment,[6] the Taliban launched its first conventional assault on Spin Boldak in 1994, with two hundred fighters split into three groups supported by artillery.[7] The disciplined fighters demonstrated proficiency in fast-paced maneuver warfare, subduing the area within two hours. They went on to capture arms depots that would fuel later operations. Taking this border area also facilitated the provision of materiel support from Pakistan.[8]

The Taliban developed relations with local tribal leaders to strengthen its hand against the various warlords vying for power in Afghanistan.[9] The group built a formidable image of itself as highly committed to the fight—a type of psychological warfare that would appear repeatedly in jihadist operations. For example, in 1995, rumors spread that a Taliban force preparing to attack Kabul was driving knowingly into minefields and chanting jihadist slogans, shocking the opposing militias.[10] This commitment transferred to a popular perception of the Taliban as the fairest actor in the Afghan militia landscape, ruling by (albeit harsh) sharia rather than the arbitrary will of a warlord.[11]

The Taliban's formidable image and style of fast-paced maneuver warfare

with small units, plus its tribal engagement activities, regularly caused enemy forces to withdraw or defect with little to no fighting, as at Lashkar Gah[12] and Ghazni.[13] This style of small-unit conventional operations supported by terrorist and insurgent tactics, with consolidation of territories through strong governance capabilities, would become the hallmark of Taliban and later jihadist success on the conventional battlefield.[14]

By 2001, the Taliban had built up a formidable conventional army, with tanks, artillery, antiaircraft weapons, multiple rocket launcher systems, aircraft, and tens of thousands of personnel.[15] Preparing for an invasion of Afghanistan, American military planners accordingly assessed the Taliban conventionally, applying traditional military analytical concepts like order of battle and doctrine.[16]

The Taliban was unprepared for the advanced airpower the United States deployed against it. In the 2001 U.S. invasion of Afghanistan, aircraft cost the Taliban approximately twelve thousand dead and twenty thousand wounded.[17] Improved precision-guided munitions, among other American airpower innovations, easily outmatched any Taliban air defense capabilities.[18] Airstrikes prevented fighters from massing and traveling in large groups while serving as a constant threat to the "technicals"—fighters mounted on armed pickup trucks—on which the Taliban and other jihadist groups have relied for mobility.[19] Thus, U.S. military superiority, particularly in the air, forced the Taliban back into an insurgent posture. Nonetheless, in August 2021, the Taliban retook the country after the United States withdrew its military forces and the Afghan National Security Forces quickly collapsed.[20]

Exporting Jihad: Al-Qaeda's Early Territorial Pursuits

The mujahedin/Taliban experience shaped the attitude of Osama bin Laden and Ayman al-Zawahiri, the founders of al-Qaeda, toward conventionalization. Bin Laden and Zawahiri helped thousands of Arabs from the Middle East travel to Afghanistan during the 1980s to join the resistance against the Soviet invasion.[21] They became wary of conventionalization[22] after witnessing

how the Soviets, and later the Americans, defeated massed jihadist forces attempting to hold terrain.[23] They founded al-Qaeda as the "quartermaster for jihad," a base on which to build an Islamic army that would spearhead the restoration of the Caliphate, or Islamic empire, when the time was right.[24] They reasoned that overtly doing battle against advanced militaries would only harm the jihad while prolonged terrorism and guerrilla warfare might wear down the foreign invaders.

In the wake of the Soviet withdrawal from Afghanistan in 1989, al-Qaeda set its sights on the United States, which the group saw as bolstering corrupt un-Islamic regimes in the Middle East like Saudi Arabia and Egypt. During the 1990s, al-Qaeda sought safe havens in Afghanistan, Sudan, and Iran; ran training camps; and conducted several high-profile attacks against American interests, such as the 1998 bombings of U.S. embassies in Kenya and Tanzania.[25] Nonetheless, al-Qaeda's execution of the gruesome 9/11 attacks, ironically meant to scare the Americans out of the Middle East, provoked the U.S. invasions of Afghanistan and Iraq in 2001 and 2003, respectively. The jihadists now faced a dilemma similar to the Soviets' invasion of Afghanistan more than two decades before. Ever reluctant toward conventionalization, al-Qaeda resolved that its first priority would be to "expel the Americans" from Iraq and Afghanistan through terrorist attacks and low-intensity resistance.[26]

Al-Qaeda grew into a global franchise whose most powerful affiliates insisted on conventionalization and governance despite its leaders' misgivings. Amid the political chaos following the 2003 invasion of Iraq, al-Qaeda in Iraq (AQI, officially formed in October 2004), the Islamic State's predecessor, took over several Sunni Iraqi cities.[27] AQI fighters typically conquered cities via gradual cooptation of populated areas. Engaging local tribes and indoctrinating residents, AQI began conscripting inhabitants, implementing sharia in its areas of operation, and fortifying its holdings with sniping positions, machine-gun nests, and well-placed improvised explosive devices (IEDs) to impede enemy movement, trap opposing forces in kill zones, and inflict heavy losses on attackers.[28] The group demonstrated increasing sophistication in its tactics and equipment, fielding armed pickup trucks (technical vehicles), enhanced IEDs,[29] and well-trained snipers.[30] Leveraging Iraqi

sectarian tensions and government corruption, AQI members infiltrated Iraqi security forces to gather intelligence on their adversaries' movements and vulnerabilities.[31] AQI established strongholds in Salman Pak, Arab Jabour, Fallujah, Ramadi, al-Qaim, Abu Ghraib, al-Karmah, Tarmiyah, and Baquba, as well as some neighborhoods of Baghdad, and assigned "emirs" (commanders) to coordinate efforts across holdings.[32] In October 2006, without seeking bin Laden's approval, AQI rebranded itself the "Islamic State of Iraq" (ISI), signaling its intention to hold and govern the territory it had acquired.[33] The vehicle-borne IED (VBIED), often delivered by a suicide driver (suicide vehicle–borne IED), became an important element of jihadist efforts to impede advancing adversaries and spread fear among them. The SVBIED would later feature as a key element of IS military operations. The 2007 U.S. "surge" of military operations in Iraq deprived ISI of its strongholds, but not before encountering heavy jihadist resistance.[34]

Jihadist Military Expansion, 2011–14

Over the course of a few years, the jihadist military expansion entered Yemen, the Maghreb (North Africa), Somalia, and then Syria.

Yemen

Following the outbreak of the Arab Spring uprisings across the Middle East in 2011, al-Qaeda in the Arabian Peninsula (AQAP) took over parts of Yemen's Abyan region. In early 2011, the Yemeni government withdrew its forces from Abyan to support the leadership in Sanaa.[35] During uprisings, the ceding of territory to jihadist groups has been a pattern among Arab authoritarian rulers to create adversaries for more moderate opposition groups and draw international attention to the jihadists.[36]

In the years preceding its seizure of Abyan, AQAP demonstrated increasing tactical proficiency, initially employing infantry assaults with mortar fire support and terrorist attacks with VBIEDs,[37] and later fielding rockets,

armored personnel carriers (APCs), and tanks it captured in raids on Yemeni security forces.[38] For its offensive on Zinjibar, AQAP massed three hundred fighters and seized the city against little resistance of defending security forces.[39]

Like AQI/ISI, AQAP immediately implemented a harsh but relatively transparent governance structure, which it likened to the Taliban's model, invoking jihadist continuity.[40] The group also developed competent military leadership, stemming from a 2006 prison break.[41] Many of the escapees were involved in well-planned terrorist attacks, such as the high-profile USS *Cole* bombing in 2000 and MV *Limburg* bombing in 2002, and became AQAP's most important military leaders.[42]

A major element in AQAP operations was its tribal engagement efforts. In Yemen's smaller, more isolated tribal communities, AQAP offered development and employment, for instance by building wells and irrigation systems in exchange for help from tribal elders in recruiting tribesmen as fighters.[43] AQAP then deployed these fighters away from their tribes' regions. This moving of fighters deterred resistance from local tribes as attacking AQAP fighters drawn from other clans might have triggered blood feuds.[44] Moreover, AQAP members married into tribal families.[45] However, this approach did not succeed with larger tribes, which enjoyed patronage from the Yemeni government and allied with the United States against AQAP.[46] As the group became better organized, it finally provoked a counteroffensive by five Yemeni army brigades, pro-government tribes, and U.S. airstrikes, depriving AQAP of its territory by late 2012.[47]

Maghreb

In the same year AQAP lost its territory, al-Qaeda in the Islamic Maghreb (AQIM) conquered much of northern Mali.[48] Many of AQIM's leaders were Algerian Arab jihadists who had fought in Afghanistan and Iraq and returned to North Africa determined to implement al-Qaeda's vision there.[49] Responding to increasing pressure from Algerian security forces, AQIM turned to Mali, where it established robust alliances with local militias and tribal groups.[50] Perhaps most important was its relationship with powerful jihadist group

Ansar al-Din, whose leader, Iyad Ag Ghali, was an influential Tuareg politician who helped AQIM win trust among Mali's non-Arab communities.[51] AQIM also handled internal divisions efficiently, remaining strategic allies with two groups that broke away from it, Katibat al-Mulathamin and the Movement for Oneness and Jihad in West Africa, despite their disagreements.[52]

AQIM's veteran fighter cadre and alliance system translated into sound combat performance. Its 2009 Timbuktu campaign was an example: After AQIM assassinated a Malian military officer in the city, the army began a pursuit of the group through the large desert area in the country's north. During the next two weeks and across hundreds of miles, the jihadists engaged the army in ambushes and skirmishes that convinced the Malians that AQIM had "many eyes watching us everywhere we went in the desert."[53] This experience suggests AQIM developed strong ties with communities throughout northern Mali that supplied the group with the intelligence it needed to attack the army at vulnerable points. AQIM also offered financial rewards for those who provided it with useful information: one could earn more than $900 for information on United Nations peacekeeping convoys in a country where the minimum wage is about $60 a month.[54] The group's organized structure undoubtedly further aided its operations, with units grouped as *kataib* (battalions) of two dozen to hundreds of men, each led by competent veteran commanders.[55]

Malian forces finally withdrew from the north in late 2012, and AQIM and its allies took control. Following historical precedents, AQIM began implementing sharia in its areas of control, conscripting their inhabitants, including hundreds of children, and setting up defensive positions with heavy machine guns and mortars.[56] The group and its jihadist coalition also ousted its former ally against the Malian military, the secular National Movement for the Liberation of Azawad (MNLA). It achieved that removal by drawing on support from local populations that preferred AQIM's sharia governance to the arbitrary rule they experienced under the MNLA.[57]

However, AQIM's jihadist coalition became a liability as prominent senior figures began pursuing their own objectives. AQIM leader Abdelmalek Droukdel wanted to focus on cultivating the areas under AQIM's control while Ag Ghali and veteran jihadist commander Mokhtar Belmokhtar argued for

pressing on to southern Mali and reorienting back to Algeria, respectively.[58] Ag Ghali provoked French intervention when he followed through with his plans to advance south. Initial French air and ground operations, as with previous Western interventions against jihadists, devastated AQIM, killing or capturing hundreds of fighters and destroying or seizing about two hundred tons of arms and ammunition, twenty IED factories, and several training camps.[59]

Somalia

Harakat al-Shabab al-Mujahedin, a Somali jihadist group that gave *baya* (a pledge of allegiance) to al-Qaeda in 2012, dominated south-central Somalia, even briefly controlling Mogadishu, the capital, and the major port city of Kismayo.[60] Like AQI, AQAP, and AQIM, this group, too, had a leadership cadre of Afghan jihad veterans and established close ties with al-Qaeda early in its history. Al-Shabab emerged from a union of sharia courts that was active during the ongoing civil war in Somalia, which started in the 1980s. Over time, the group took on a transnational character as the Afghan jihad veterans, including Ahmed Abdi Godane and Mukhtar Robow, gained more prominent roles. In Somalia's highly tribalistic and increasingly religious society, al-Shabab appealed to many against a backdrop of competing self- or clan-interested warlords and intervention by Somalia's longtime rival, Ethiopia, whose majority Christian population al-Shabab and other jihadists refer to derogatorily as "crusaders" encroaching on Muslim lands.[61] Al-Shabab's clan-transcending jihadist outlook thus helped produce a highly unified, cohesive organization of thousands of fighters.[62]

Echoing past jihadists, al-Shabab exploited Somali tribal dynamics to achieve outsize gains and territory. It dominated the Somali military through infiltration, having its members spy on the army and offering monetary compensation to anyone who provided useful intelligence. Those tactics allowed al-Shabab to anticipate army advances and more easily locate their vulnerable points.[63] The group turned rival clan militias against each other and coopted others to help bring victories, such as with al-Shabab's 2006 seizure of Kismayo. Many of the al-Shabab fighters and commanders sent

to capture the port city were from the Ayr subclan, from which many of the militiamen defending Kismayo also hailed. When the jihadists rapidly advanced toward Kismayo, these militiamen defected rather than fight their fellow clansmen, and the remaining non-Ayr defenders surrendered without a fight.[64] Al-Shabab intelligence capabilities were so developed that the group has created a dedicated intelligence wing called Amniyat. This body boasts highly experienced fighters able to enforce "taxation" (extortion of Somali businesses and individuals), assassinations, infiltrations (of both the government and the military), and conscriptions almost anywhere in Somalia, including outside of al-Shabab's territories.[65]

However, al-Shabab's capabilities to execute larger conventional operations remained relatively limited. Its largest operation, the 2010 "Ramadan offensive," meant to completely oust Somali military and allied international forces from Mogadishu, saw a large concentration of up to eight thousand Shabab fighters, but it succumbed to the superior firepower and armor of determined African Union soldiers.[66] Thereafter, al-Shabab was forced to retreat from Mogadishu, and in 2012, the group barely attempted to defend Kismayo, which fell to Kenyan soldiers in a matter of days.[67] U.S. airstrikes further hindered the group by targeting important leaders.[68] Although al-Shabab is now territorially confined mostly to rural areas, the Somali military and African Union have been unable to break the group's hold on populations both within and outside its territories.

Syria

The outbreak of the Syrian civil war in 2011 unleashed a new wave of jihadist conventionalization. Multiple jihadist factions, both local and international, appeared in the conflict and frequently took and held terrain. One factor enabling this spike in conventionalization was a huge jump in membership. According to U.S. intelligence estimates, al-Qaeda's affiliates in Syria—Jabhat al-Nusra (later Hayat Tahrir al-Sham) and the Islamic State of Iraq and al-Sham (ISIS, formerly ISI, and later IS)—together boasted tens of thousands of fighters.[69] Fuad Hussein, chief of staff to the president of the Iraqi Kurdistan Regional Government, estimated that ISIS alone had as many as 200,000

members by late 2014,[70] far outdoing earlier jihadist armies.[71] A coalition of Syrian Islamist factions known as Jaish al-Fatah that took over parts of Idlib province in 2015 had as many as 50,000 fighters.[72] An unprecedentedly large influx of at least 45,000 foreign fighters certainly contributed to the growth in jihadist manpower, particularly for ISIS.[73]

Jihadist groups in Syria set up governance structures in places they conquered, formed joint command bodies, and sported advanced weapons. Jaish al-Fatah created a "joint operations room" to coordinate military operations across its members.[74] This move emulated the joint command structure of a conventional army. In Raqqa, Jabhat al-Nusra worked with the Syrian jihadist group Ahrar al-Sham to build institutions to administer infrastructure and other public services.[75] The civil war has also seen jihadists adopt widespread battlefield use of antitank guided missiles (ATGMs)[76] and increasingly armored SVBIEDs.[77] It was against this backdrop that IS would rise to power.

Assessing Sunni Jihadist Military Effectiveness up to 2014

Echoing Taliban methods, Sunni jihadist campaigns engaged with local tribes and clans, conducted psychological warfare, and took on governance roles to consolidate victories attained through fast-paced, small-unit combat operations. However, many jihadist campaigns succumbed to disillusioned populations, tribal discontent, and Western intervention. It is telling that al-Shabab has remained in continuous control of much of its original territory until the present, coopting many of the clans in its areas of control and lacking any serious opposition besides African Union forces. With a growing force and expanding territory, the group implemented regional suborganizations, each headed by a semiautonomous *wali* (governor) commanding up to one thousand fighters, a structure on which IS would later improve.[78]

Military capabilities continued playing an important role in jihadist success. The ability to field a cohesive, determined force, regardless of its tactical proficiency or size, proved important for the jihadists to take

advantage of their adversaries' weaknesses. Often, jihadist preparatory psychological warfare and a tribal engagement campaign preceded the victory. Extensive intelligence operations supported these activities. Jihadist units also showed a robust degree of cohesion and unity of command, at times coordinating strike forces of thousands of fighters, as with al-Shabab's Ramadan offensive.[79]

Additionally, jihadist units demonstrated a consistently high will to fight. Organizational unity and morale arose from two factors: a jihadist warrior culture and what Kenneth Pollack termed "Darwinian" organizational formation.[80] First, most of the founders and leaders of AQI, AQAP, AQIM, and al-Shabab shared not only a jihadist ideology that venerates courage in battle, martyrdom, and the example of the Prophet Muhammad, but also the Afghan jihad experience.[81] These strong ties, based on ideology and common war experience, translated to high morale.

Second, these organizations all crystallized in the cauldron of war: first the anti-Soviet resistance and Afghan War, and then the Iraq war and Yemeni, Malian, Somali, and Syrian civil wars. Jihadist elements participated in other engagements as well, including the 1992–95 Bosnian war, the 1991–2002 Algerian civil war, the decades-long Chechen-Russian and Philippine Moro conflicts, and uprisings in Libya and Egypt. The wars led to a "Darwinian" process in which decades of conflict solidified a veteran cadre of each group's best, most experienced fighters and strongest leaders.[82] In terms of military effectiveness, decades of constant conflict and adaptation yielded hardened, resilient forces deeply committed to the jihadist cause and well suited for coordinated, fast-paced operations.[83]

Often with limited manpower and weak air-defense capabilities, jihadists relied on small-unit operations to achieve outsize gains against numerically superior, better-equipped adversaries. Lower manpower stemmed from recruitment capacity as well as al-Qaeda's ideological reluctance to conventionalize prematurely. Likewise, preferring a gradualist approach to building up an Islamic army, al-Qaeda had a notoriously rigorous vetting process for recruits.[84] Even al-Qaeda affiliates that did opt to take terrain only did so opportunistically, such as when targets were virtually undefended; established small "emirates"; and remained extremely cautious

about expanding[85]—let alone declaring the caliphate.[86] The threat of air attack forced jihadist groups to fight dispersed in smaller formations, even as organizational memberships increased during the Syrian civil war. IS would retain this small-unit ethos on the whole, but the group also became adept at massing larger forces under camouflage and concealment or at times when airpower was unavailable to its adversaries.

The suicide bomb became an emblematic weapon and a characteristic of jihadist military effectiveness. Having ironically adopted the weapon from its hated Shia jihadist rivals via Palestinian terrorist groups,[87] al-Qaeda and its affiliates used suicide bombs to terrorize their adversaries, contributing to their fearsome image and shaking their enemies' morale.[88] As it became a symbol of the global jihadist movement, suicide bombing further emboldened jihadists, serving to increase zeal and support through a transnational veneration of martyrdom.[89] This zeal fed back into a heightened will to fight, and IS would later enhance suicide bombs for large-scale use on the conventional battlefield.

Innovation has become another characteristic of jihadist military effectiveness. Often facing the world's most advanced militaries (e.g., Soviet, U.S.), jihadist groups have always had to either innovate and adapt or die. The Taliban developed means of evading Soviet and U.S. airpower, AQI enhanced its IED capabilities to wage an effective insurgency against the United States, and al-Shabab fostered an intelligence wing that enabled it to operate effectively even where better-armed U.S.-backed African Union forces predominated. The ideological imperative of securing territory further drove innovations in jihadist tactics to adapt to conventional warfare, as in increasing military hierarchical organization of units for combat operations and constructing fortifications for urban defenses. This trend would considerably accelerate with IS, whose innovations in the use of suicide bombing, drones, and other weapons and tactics would bring the global jihad to new heights.

Do Jihadists Aspire to Conventional Military Strength?

Jihadist operations might be associated in the public mind with terrorism or insurgency rather than with conventional warfare. But jihadists have always sought conventional military capabilities, and al-Qaeda's reluctance to incorporate them was an exception. The influential jihadist ideologue Sheikh Abu Muhammad al-Maqdisi lamented in the 1980s and 1990s, when the Afghan jihad was just beginning to conventionalize, that jihadists were not focused enough on *qital al-tamkin*, or fighting for the sake of consolidating territory.[90] Even al-Qaeda acknowledged that it would have to eventually shift to conventional warfare and recognized that its reluctance to do so was unpopular.[91] Evidently, al-Qaeda's insistence that capturing territory would have to wait until some unspecified time did not resonate with its disciples. The U.S. invasions of Afghanistan and Iraq provided the pretext for al-Qaeda to satisfy its jihadist detractors by approving campaigns against U.S. forces there, which was, as Steven Brooke said, "a position of broader support among jihadists."[92] Overall, the global Sunni jihadist movement has actively pursued, acquired, and deployed conventional warfare capabilities to achieve its aims, with al-Qaeda remaining an exception to this rule.

There are numerous historical examples of jihadist conventional military operations. Even today, after the U.S. wars in Afghanistan and Iraq and the defeat of the Islamic State's territorial caliphate, the Taliban has returned to power,[93] al-Qaeda's affiliates vie openly for land in West Africa[94] and Yemen,[95] and Jabhat al-Nusra successor Hayat Tahrir al-Sham holds on in Syria.[96] Furthermore, IS affiliates continue battling for territory in southern Africa.[97] The U.S. military has engaged jihadist groups on conventionalized battlefields during segments of the wars in Afghanistan, Iraq, Yemen, and Syria.[98] It is worth recounting some of the important battles and campaigns not involving IS that were fought between jihadists and state military forces:

- Mecca Great Mosque (1979), Armed Forces of Saudi Arabia versus followers of Juhayman al-Utaybi

- Kabul (1992), Afghan government forces versus mujahedin
- Herat (2001), U.S. Armed Forces and allies versus Taliban
- Fallujah (2004), U.S. Armed Forces and allies versus AQI
- Kamdesh (2009), U.S. Armed Forces versus Taliban
- Abyan (2015), Yemeni Armed Forces versus AQAP
- Northwest Syria (2019), Syrian Arab Armed Forces and allies versus Hayat Tahrir al-Sham and allied groups

From this perspective, al-Qaeda's reluctance to conventionalize was the exception that proves the rule. As Nelly Lahoud and Liam Collins suggest, just as fixation on al-Qaeda overly conflated jihadism and terrorism, so too did ignoring the desire of other Sunni jihadist groups to hold territory lead outside observers to be surprised at the Islamic State's stunning success in 2014.[99] Notwithstanding the spectacles of fighting power that jihadists had shown before 2014, a notion emerged among media observers that IS "came out of nowhere."[100] Somehow, IS was characterized as discontinuous within the global jihadist movement.

On the contrary, IS was very much an evolution of AQI and later ISI. As defense expert Barak Salmoni predicted as early as 2011, "The [Iraqi security forces] would have serious difficulty autonomously attacking and neutralizing well-fortified concentrations of insurgents in Iraq…It would also require much more time—perhaps too much to overcome the momentum of a large-scale domestic uprising."[101] Indeed, AQI became increasingly focused on capturing territory after 2004, when Abu Musab al-Zarqawi led the group in taking over multiple Iraqi Sunni cities with the goal of applying sharia. Al-Qaeda's other affiliates largely followed suit, which displeased bin Laden and Zawahiri, who could only issue letters of criticism and advice in response. ISI then slowly built up its capabilities through its war experience in Iraq, learning how to fight by fighting the Americans and engaging with Iraq's tribal communities. This multiyear effort was therefore evolutionary, not out of nowhere. The Islamic State would rise out of this process. The motivations and elements of its fighting style are described in the next chapter.

Notes

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8 Ibid.
9 Mike Martin, *"Kto Kovo?* Tribes and Jihad in Pushtun Lands," in *Tribes and Global Jihadism*, ed. Virginie Collombier and Olivier Roy (New York: Oxford University Press, 2018), 49.
10 Johnson, *The Afghan Way of War*, 252–53.
11 Martin, *"Kto Kovo?* Tribes and Jihad in Pushtun Lands," 49.
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13 Johnson, *The Afghan Way of War,* 252.
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17 Another seven thousand were captured. Johnson, *The Afghan Way of War*, 258–59.

18 Perry and Kassing, *Toppling the Taliban*, 44–48.

19 Johnson, *The Afghan Way of War*, 258–59; and Ravi Somaiya, "Why Rebel Groups Love the Toyota Hilux," *Newsweek*, October 14, 2010, https://www.newsweek.com/why-rebel-groups-love-toyota-hilux-74195.

20 This event occurred just after the initial submission of this book's first manuscript. The Taliban achieved the full takeover of the country in a lightning offensive lasting only one week, an exceptional demonstration of jihadist effectiveness in conventional warfare akin to the Islamic State's rapid advance on northern Iraq in the first half of 2014. This case deserves closer scrutiny in the context of jihadist military operations, but not enough time has yet passed to give it the attention it requires with enough historical material. Joseph Krauss, "Taliban Take Over Afghanistan: What We Know and What's Next," Associated Press, August 16, 2021, https://apnews.com/article/taliban-takeover-afghanistan-what-to-know-1a74c9cd866866f196c478aba21b60b6.

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22 An example of this is Zawahiri's 2005 letter to Abu Musab al-Zarqawi, the founder of al-Qaeda in Iraq, urging the latter to refrain from declaring an "emirate"—the term the Taliban used for its governance structure in Afghanistan—until after "removing the Americans" and winning "popular support from the Muslim masses in Iraq and the surrounding countries." Zawahiri warned the "mujahid movement would be crushed" otherwise. See Ayman Zawahiri, "Zawahiri's Letter to Zarqawi" (CTC Harmony Program, July 2005), https://www.ctc.usma.edu/harmony-program/zawahiris-letter-to-zarqawi-original-language-2/. In addition, when the head of al-Qaeda in the Arabian Peninsula, Naseer al-Wuhayshi (also spelled Wahishi), told bin Laden of his plan to take territories in Yemen, bin Laden urged caution, admonishing, "We have to

remember that the enemy toppled the Taliban and Saddam's regime." Osama bin Laden, "Letter to Nasir Al-Wuhayshi" (CTC Harmony Program), accessed December 4, 2020, https://ctc.usma.edu/harmony-program/letter-to-nasir-al-wuhayshi-original-language-2/. In a letter to al-Shabab's leader, bin Laden reluctantly acknowledged the group had established governance structures in Somalia, but warned that declaring an Islamic state would "have the enemies escalate their anger and mobilize against you; this is what happened to the brothers in Iraq." See Osama bin Laden, "Letter from Usama Bin Laden to Mukhtar Abu Al-Zubayr" (CTC Harmony Program, August 7, 2010), https://ctc.usma.edu/harmony-program/letter-from-usama-bin-laden-to-mukhtar-abu-al-zubayr-original-language-2/.

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24 Daniel Benjamin and Steven Simon, *The Age of Sacred Terror* (London: Random House, 2002), 113.

25 "East African Embassy Bombings," Federal Bureau of Investigation, accessed February 16, 2021, https://www.fbi.gov/history/famous-cases/east-african-embassy-bombings.

26 See Zawahiri, "Zawahiri's Letter to Zarqawi."

27 L. Cottam and Joe W. Huseby, *Confronting al Qaeda: The Sunni Awakening and American Strategy in al Anbar* (London: Rowman & Littlefield, 2016), 69–77.

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weapon caches with Persian writing on them. Author interview with U.S. military member, December 2020. In a letter to an al-Qaeda member named "Karim," bin Laden describes Iran as "our main artery for funds, personnel, and communication." Iran has periodically also allowed al-Qaeda operatives to use its territory as a safe haven since the Taliban's fall in 2001. Osama bin Laden, "Letter to Karim" (Office of the Director of National Intelligence, October 18, 2007), https://www.dni.gov/files/documents/ubl2016/english/Letter%20to%20Karim.pdf; and Assaf Moghadam, "Marriage of Convenience: The Evolution of Iran and al-Qa'ida's Tactical Cooperation," *CTC Sentinel* 10, no. 4 (April 14, 2017): 13.

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43 Swift, "Arc of Convergence," 3.

44 Ibid., 3–4.

45 Ibid., 5.

46 Author interview with U.S. military officer, November 2020; and Swift, "Arc of Convergence," 3–5.

47 Author interview with U.S. military officer, November 2020; and Mohammed Mukhashaf, "Yemen Army Says Seizes Qaeda Bastion in Major Advance," Reuters, June 15, 2012, https://www.reuters.com/article/us-yemen-violence-idUSBRE85E0AG20120615.

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57 Ibid., 922; Chivvis and Liepman, "North Africa's Menace," 8.
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2

Origins and Elements of Islamic State Military Effectiveness

By late 2013, the Islamic State had established itself as the strongest of Syria's warring jihadist groups, quickly sidelining others and expanding in Iraq. It grew rapidly, ultimately attracting most of the foreign fighters arriving in Syria[1] and subsuming smaller groups that pledged allegiance to it.[2] The group's ensuing conventional warfare tactics would bring jihadist military campaigns to new heights. Why did the Islamic State decide to conventionalize? What were the factors contributing to its military effectiveness in conventional warfare operations?

The Core Motivation: Apocalyptic Jihadism

The Islamic State developed, from its outset, a distinctive apocalyptic ideology that set the conceptual groundwork for the group's adoption of conventional warfare. Abu Musab al-Zarqawi sought to ignite a civil war in Iraq that would create the conditions for the Caliphate to rise and serve as a bastion for the forces of good in the apocalypse. After Zarqawi's death in 2006, his successor, Abu Ayyub al-Masri, the founding leader of the Islamic State of Iraq, solidified the group's apocalypticism rooted in his belief that the

"Mahdi, the Muslim savior, would come within the year. To [Masri's] thinking, the Caliphate needed to be in place to help the Mahdi fight the final battles of the apocalypse…He also ordered his commanders in the field to conquer the whole of Iraq to prepare for the Mahdi's coming."[3]

Of course, end-times still did not come, but IS continued perpetuating its foundational apocalypticism and urgency to restore the Caliphate. IS played up these themes in its magazines *Dabiq* and *Rumiyah*—which were published in multiple languages, including English—with the two titles directly referring to the apocalypse.[4] The November 2015 issue of *Dabiq* proclaimed "The Extinction of the Grayzone" so that "no Muslim had any excuse to be independent of this entity [the caliphate] embodying them and waging war on their behalf in the face of *kufr* [disbelief]."[5]

But a caliphate presupposes a state and territory to govern. The legitimacy of the caliphate, as Graeme Wood notes in one of the most insightful accounts of the Islamic State's ideology, rests on the extent to which the caliph can enforce sharia, making control of territory paramount.[6] Indeed, the previous attempts of AQI/ISI to impose sharia were short-lived and unsuccessful because of its military weakness and the ability of its enemies to crush the noncontiguous jihadist statelets that rose and fell in various Iraqi cities during the Iraq war. This was no way to administer a caliphate, let alone to set the conditions for mass immigration to the state, absolute dissociation from "infidels and polytheists," and implementation of sharia sought by IS.[7]

The answer was to build an army capable of conquering territory—that is, conventionalization. The Islamic State revealed a five-step strategy it attributed to Zarqawi to achieve this goal in its inaugural July 2014 issue of *Dabiq*, one week after declaring the caliphate. *Hijra,* which means "immigration" in Arabic and refers here to immigration to a land of jihad, was step one, followed by *jamaah*, the formation of fighting groups. In the third stage, these groups would create instability by engaging in *nikayah* or terrorist and insurgent attacks against the *taghut*—an Islamic referring to idolatry that jihadists use for apostate tyrants ruling over Muslim lands. *Tamkin*, or consolidation of territory, was the fourth step, attained through "more complex attacks of a larger scale" in weakened, destabilized areas. *Khilafa*, declaration of the caliphate, was the last step.[8]

IS stressed the crucial step of *tamkin*—and consequently the necessity of conventionalization because of the need to hold and govern territory. It accused al-Qaeda and its affiliates of unduly delaying this stage, asserting they had "become frozen in the phase of *nikayah* attacks, almost considering the attainment of power to be taboo or destructive."[9] The time was ripe for the consolidation of territory, and any further delay would be tantamount to apostasy. This ideological orientation put IS firmly on the path of conventionalization.

Factors Contributing to IS Effectiveness

Apocalypticism helped put IS on the path of conventionalization. Once conventionalized, IS demonstrated astonishing success in its military campaigns against larger, more established state actors, prompting considerable scrutiny. There are four major explanations for its military effectiveness:

1. IS organizational innovations allowed it to operate effectively on a larger scale.

2. Extensive preparatory, or "shaping," operations directed at demoralizing, infiltrating, and enfeebling adversaries before engaging them enabled IS to repeatedly achieve outsize gains.

3. IS fighters had a high will to fight and often faced demoralized enemies.

4. By seizing and retaining the initiative, IS could maintain an aggressive pace of operations and fight under its preferred circumstances.

Organizational Innovation

A number of observers, including Ahmed S. Hashim,[10] Craig Whiteside, Vera Mironova,[11] Omar Ashour,[12] and David L. Knoll,[13] have noted how IS organizational innovations enabled its conventional operations.[14] Hashim points out

ISI's reorganization of its military structure since 2012 to cultivate aggressive light infantry "battalions" of 300–350 men each, three of which would be assigned to every regional commander.[15] Units were also given functionally specialized roles, such as special assault forces (*inghimasi*), sappers, and tank hunter teams.[16] Whiteside notes how IS integrated small-unit operations with its media apparatus by, for example, attaching a videographer to a unit conducting a raid on Haditha in 2012.[17] Similarly, the researcher Barak Barfi describes combat units' integration with the Islamic State's media apparatus, based on near-real-time IS broadcasting of many of its battles and use of information warfare in advance of offensives to demoralize targeted forces, with camera operators often attached to strike forces.[18] Another important innovation was the Islamic State's creation of a Committee for Military Manufacturing and Development, which handled the large amounts of equipment captured from its enemies, constructed suicide vehicle–borne improvised explosive devices on an industrial scale, and modified materiel like drones and civilian vehicles for use as surveillance assets, suicide car bombs, or improvised aerial explosive delivery platforms.[19] Ashour focuses on the importance of IS tactical innovations stemming from its ability to integrate terrorism, guerrilla fighting, and conventional warfare.[20]

The influx of more than forty thousand foreign fighters from more than 110 countries to IS gave the group an edge in military technical expertise and tactics that it used to man its organization and augment its training and fighting capabilities.[21] Russian-speaking foreign fighters, numbering about nine thousand according to research from the Soufan Group—a global intelligence consultancy known for its work on jihadist terrorism—gained a particularly fearsome reputation.[22] Uzbeks, Chechens, Kazakhs, and Tajiks, many coming with military training and experience fighting the Russian military, participated heavily in training camps,[23] operational planning, and many of the Islamic State's most successful engagements.[24] These foreign fighters brought proficiency in sniping, heavy weapons, military vehicle operation, maneuvers, defense planning, and chemical weapons.[25] Their deployment in training camps and as leaders of IS tactical units played an important role in success on the conventional battlefield and in enabling proper functioning of the expanded IS organizational structure.

Extensive Shaping Operations

Craig Whiteside's application of "revolutionary warfare" to the Islamic State perhaps most clearly outlines the school of thought ascribing IS success to extensive shaping operations.[26] According to this framework, IS succeeded because of its careful tribal engagement, infiltration and weakening of local security forces, alliances forged with external groups, and development of governance institutions. These preparatory operations enabled it to quickly knock down already weakened adversaries and more easily take control of conquered populations.[27] Paul B. Rich also discusses these operations,[28] and Michael Knights notes their importance in the context of allowing IS to keep the initiative.[29]

IS established *dawa* (Islamic preaching and proselytization) and "tribal" offices to engage with local community leaders and gather intelligence on local rivals.[30] Against opposing military forces and resistant tribes, IS used infiltrations and assassinations to degrade and demoralize them, as well as sleeper cells behind enemy lines to support IS offensives.[31] As in the historical jihadist experience, IS particularly tried to gain tribal support (or acquiescence) through a campaign of diplomacy for receptive tribal leaders and intimidation for those intent on resisting IS.[32] In a study on IS activities in parts of Libya, northwest Syria, and Yemen, Washington Institute jihadism expert Aaron Zelin demonstrates how IS aimed to consolidate control over territories by combining insurgent and intelligence operations with "soft" *dawa* activities, including holding Quranic memorization contests for children, distributing propaganda pamphlets in print and online to the public, and hosting meals with local notables.[33]

An important component of IS success was its cultivation of an image of invincibility and brutality. It waged information warfare by disseminating online the atrocities it committed against its enemies, including beheadings and burnings.[34] The group's aggressive patrolling, sniping, raids, suicide tactics, mortar strikes, and terrorist attacks helped create a feeling among IS enemies that the group could strike at any place or time. Anti-IS forces responded by staying concentrated in their bases to avoid exposure to IS attacks. This response ceded the initiative to the group, which could then

conduct intelligence-gathering operations unhindered and concentrate on offensive strikes in places of its choosing.[35] Even when Iraqi military units and Kurdish fighters took to the offensive, constant IS counterattacks, propaganda broadcasts, atrocities against civilians, suicide car bombs, and other brutal acts affected their morale.[36] Throughout the war against IS, the group's fearsome image gave it more freedom of movement, demoralized its adversaries, and supported its recruitment efforts.

Will to Fight

According to another school of thought, IS success hinged on the fighters' high will to fight and the comparably low morale of its adversaries. Nelly Lahoud emphasizes the high morale and commitment the jihadist ideology promotes.[37] Pollack ascribes IS success largely to "zeal"[38] while he and Gabi Siboni point to the importance IS assigned to indoctrinating its members.[39] Ángel Gómez and his coauthors discuss the importance of "the devoted actor's will to fight" in the group's operations.[40]

Across engagements, IS fighters held their ground, rarely fled in disarray, and usually conducted orderly retreats when withdrawing.[41] Cases of IS members surrendering were few and occurred mostly when IS was losing its territories in Iraq and Syria.[42] In fact, a U.S. officer involved in the later stages of the anti-IS war in Syria stated that the group sometimes sent members to surrender, indicating that the actions may have been part of a strategy rather than morale breakdown.[43] Also, IS punished those who surrendered without authorization, or it sometimes sent suicide bombers among ostensibly surrendering crowds.[44]

IS relied on a mix of morale and coercive motivational factors to maintain its fighters' will to fight. Ideology played the primary role in keeping up morale. Many observers of the group's military operations note how committed IS members were to their cause.[45] The group also invested significantly in indoctrinating its members; even within military units, commanders and sharia advisors played indoctrination roles down to the platoon level.[46] Ties among fighters, a common motivating factor for jihadist groups,[47] seem to have been somewhat significant in that IS units were stationed in the

localities of their recruits, and foreign fighter combat units were grouped by language spoken.[48] However, the group's diversity sometimes compromised cohesion and morale. Foreign fighters of different nationalities often could not communicate with each other, and foreign and local militants quarreled over loot distribution.[49] The more zealous IS members went as far as to declare *takfir* (apostasy) on their fellow fighters or IS leader Abu Bakr al-Baghdadi.[50]

Notwithstanding these tensions, IS units were often coerced to fight hard. Leaving the group was prohibited and members who left risked severe punishment.[51] In its final defenses, as in Baghuz, Syria, IS armed large numbers of women and children to keep up the fighting, and relied more on conscription to occupy its holdings.[52] Further, local IS fighters who might have otherwise sought to leave the group sometimes decided to stay because they and their families would be ostracized by their original communities if they left IS.[53] Foreign fighters had even less incentive to leave because they mostly lacked connections to Iraq and Syria and would have had trouble blending in with local communities or faced prosecution in their home countries on their return, if they even could return. Finally, as in the defense of Mosul, many IS fighters kept fighting simply because they had no other option; fleeing from the encircled city or surrendering was impossible in their eyes.[54] The more extremist fighters would force others to stay and fight, threatening them or their families if they were to run.[55]

Another component of IS fighters' will to fight was widespread use of Captagon (or its scientific name fenethylline), an amphetamine-type drug that increases physical endurance, focus, and alertness.[56] Although sharia prohibits drug consumption, jihadists have used drugs to improve combat performance since at least the early 2000s, when AQI hideouts were found filled with drug paraphernalia.[57] In terms of combat performance, Captagon produces emotional detachment and hyperactivity that translates to fearlessness and remorselessness, as well as callousness that diminishes physical fatigue and even pain from gunshot wounds or other serious injuries. One U.S. Special Operations Forces (SOF) officer recalled a 2015 assessment that 30–50 percent of IS fighters were using Captagon.[58] Another stated that IS had a drug manufacturing operation, a presumption based on the discovery

of Captagon production material, such as labs, baggies, and pill casings, in IS hideouts.[59] Captagon sometimes had noticeable effects on IS fighters, as described by Brig. Gen. Matthew C. Isler, who said that a fighter at the battle of Mosul sprinted uninterrupted for fifteen minutes to escape airstrikes.[60] Therefore, Captagon served as a combat performance enhancer as well as a morale booster for IS.

In contrast, the adversaries of the Islamic State did not have consistently high morale or motivation. The poor morale of Iraqi forces, some Syrian rebel groups, and some Libyan factions[61] played a major role in the ability of IS to make its initial gains almost unopposed. Determined opponents, such as Kurdish fighters at Kobane, Syria;[62] the Egyptian Army at Sheikh Zuwaid;[63] and the Iraqi Counter Terrorism Service (CTS) at Bayji oil field,[64] mostly slowed, stopped, and reversed IS advances. Thus, simply whether an adversary could stand its ground, thereby drawing out an engagement, played a major role in determining the outcome of a battle.

Maintaining the Initiative

Some analysts emphasize the Islamic State's retention of the initiative as key to its military success. Michael Knights focuses on the importance of key offensive capabilities, including surprise and mobility, to its early successes, hence its attempts to retain the initiative.[65] Accordingly, Knights and coauthor Alexander Mello (now known as Alex Almeida) emphasize the group's adaptation of aggressive light infantry that excelled in active patrolling, probing, sniping, preregistered mortar and artillery strikes, and other activities meant to shock opponents, dominate no man's land, and keep enemy forces on their toes.[66] They posit that even when on the defensive, IS demonstrated "tactical restlessness"—a constant need to remain on the attack resulting in an active defense with frequent counterattacks.[67]

Indeed, when it had the initiative, IS was able to make full use of its strengths in fast-paced operations. The ability to choose when and where to concentrate its forces complemented IS psychological warfare since it could take the time to weaken and demoralize a hostile position before quickly attacking and delivering a coup de grâce.[68] Conventional Arab militaries'

inclination to make little effort at patrolling, probing, or other aggressive operational activities helped IS retain the initiative, particularly against the Iraqi and Syrian militaries. Quick offensive strikes by IS also helped avoid prolonged combat, which could strain its relatively limited logistical capacity and expose it to the devastating effect of airstrikes, against which it had no defenses.

In contrast, when IS was on the defensive—and, therefore, did not hold the initiative—its ability to conduct reconnaissance, intelligence gathering, targeted psychological warfare, and surprise attacks was hamstrung, and it could do far less to avoid airstrikes.[69] It also had to rely more on its weaker capabilities, namely tactical proficiency of individual fighters[70] and logistics.[71] In sum, IS could draw on its greatest strengths when it had the initiative, and it had to rely on its weaker capabilities while on the defensive.

This need to maintain constant offensive action in a conventional battle setting led to IS pioneering the battlefield use of SVBIEDs.[72] Drawing on its technical expertise and captured military equipment, IS fit explosives on civilian and military vehicles alike and used them to shock enemy forces and exploit tactical surprise.[73] The shock and suppression effects of these weapons often imitated those of indirect fire, airstrikes, and precision-guided munitions, strengthening the group's offensive thrusts, demoralizing targets of suicide attacks, eliminating opposing commanders, and slowing its adversaries' advances. Therefore, IS integrated the suicide bomb, a symbol of jihadist terrorism, as an important element of its fast-paced conventional operations.

In sum, there are four major explanations for the Islamic State's prowess on the conventional battlefield. Organizational innovations allowed it to operate on a larger scale, while retaining the initiative enabled it to exploit its greatest strengths. Extensive shaping operations helped create the conditions for its success, including weakened adversaries. The high will to fight of IS fighters allowed them to more fully press their advantage against enemies demoralized by their own dysfunction as well as IS tactics. The next chapter will examine how these elements converged in four military operations: IS offensives on Ramadi and Kobane and IS defenses of Mosul and Baghuz.

Notes

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12 Omar Ashour, *How ISIS Fights: Military Tactics in Iraq, Syria, Libya, and Egypt* (Edinburgh: Edinburgh University Press, 2021).

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14 Following Martha Crenshaw's definition, this text understands "organizational innovation" to mean "changes in group structure and institutions." See Martha Crenshaw, "Innovation: Decision Points in the Trajectory of Terrorism," in *Terrorist Innovations in Weapons of Mass Effect: Preconditions, Causes, and Predictive Indicators*, ed. Maria J. Rasmussen and Mohammed M. Hafez (Fort Belvoir, VA: Defense Threat Reduction Agency, 2010), 40.

15 Hashim, *Caliphate at War*, 209–11

16 Ibid., 212–13. The *inghimasi* (literally "penetrators") were specially trained fighters entrusted with storming enemy positions and detonating a suicide vest if cornered.

17 Whiteside, Rice, and Raineri, "Black Ops," 11.

18 Barak Barfi, "The Military Doctrine of the Islamic State and the Limits of Ba'athist Influence," *CTC Sentinel* 9, no. 2 (February 2016): 19, https://ctc.usma.edu/the-military-doctrine-of-the-islamic-state-and-the-limits-of-baathist-influence/.

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30 Aymenn Al-Tamimi, "The Evolution in Islamic State Administration: The Documentary Evidence," *Perspectives on Terrorism* 9, no. 4 (2015): 120–22.

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and Olivier Roy (New York: Oxford University Press, 2018), 27–32.

32 Whiteside and Elallame, "Accidental Ethnographers"; Whiteside, "New Masters of Revolutionary Warfare"; and Whiteside, "Nine Bullets for the Traitors," https://doi.org/10.19165/2018.1.07.

33 Aaron Y. Zelin, *The Islamic State's Territorial Methodology*, Research Note 29 (Washington DC: Washington Institute, 2016), 2–3, https://www.washingtoninstitute.org/uploads/Documents/pubs/ResearchNote29-Zelin.pdf.

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38 Kenneth M. Pollack, *Armies of Sand: The Past, Present, and Future of Arab Military Effectiveness* (New York: Oxford University Press, 2019), 501.

39 Gabi Siboni, "The Military Power of the Islamic State," in *The Islamic State: How Viable Is It?* ed. Yoram Schweitzer and Omer Einav (Tel Aviv: Institute for National Security Studies, 2016), 69, https://www.inss.org.il/publication/military-power-islamic-state/.

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41 Author interviews with U.S. SOF officers, November 2020–March 2021.

42 Rod Nordland, "ISIS Fighters, Having Pledged to Fight or Die, Surrender en Masse," *New York Times*, October 8, 2017, https://www.nytimes.com/2017/10/08/world/middleeast/isis-iraq-surrender.html; and Ben Wedeman, Kareem Khadder, and Eliza Mackintosh, "500 ISIS Fighters Surrender in Group's Last Syrian Enclave," CNN, March 6, 2019, https://www.cnn.com/2019/03/05/middleeast/syria-baghouz-isis-fighters-surrender-intl/index.html.

43 Author interview with U.S. military officer, November 2020; Author interview with U.S. SOF officers, December 2020. A discussion in greater detail is in chapter 3.

44 Sarah Kolinovsky, "Mosul ISIS Fighters Feigning Surrender in Order to Attempt Suicide Attacks," ABC News, July 11, 2017, https://abcnews.go.com/International/mosul-isis-fighters-feigning-surrender-order-attempt-suicide/story?id=48573098.

45 Pollack, *Armies of Sand*, 501–2; Gómez et al., "Devoted Actor's Will to Fight," https://doi.org/10.1038/s41562-017-0193-3; Siboni, "Military Power of the Islamic State," https://www.inss.org.il/publication/military-power-islamic-state/.

46 Author interview with U.S. SOF officer, December 2020; Anas Elallame et al., "The Islamic State's Department of Soldiers" (George Washington University Program on Extremism, April 2021), 6, https://isisfiles.gwu.edu/concern/reports/c247ds10z?locale=en.

47 Michael Eisenstadt and Kendall Bianchi, "The Ties That Bind: Families, Clans, and Hizballah's Military Effectiveness," *War on the Rocks*, December 15, 2017, https://warontherocks.com/2017/12/ties-bind-families-clans-hizballahs-military-effectiveness/.

48 Mironova, *From Freedom Fighters to Jihadists*, 142–43.

49 Ibid., 145–53. There were multiple examples of conflict between local- and foreign-recruited IS members. When Kurdish forces retook Sinjar from IS in November 2015, locally recruited IS fighters blamed French, Russian, and American foreign fighters for the loss. In early IS conquests, foreign fighters were often paid more than their local counterparts and even were favored in the distribution of sex slaves to IS fighters. In July 2015, Albanian and Russian foreign fighters killed three local recruits in a quarrel over oil smuggling proceeds in the Alace oil fields near Kirkuk.

50 See Mironova, *From Freedom Fighters to Jihadists*, 173–207. Vera Mironova and Ekaterina Sergatskova, "The Chechens of Syria: The Meaning of Their Internal Struggle," *Foreign Affairs*, September 7, 2017; Lahoud, "Strengths and Weaknesses of Jihadist Ideology," https://ctc.usma.edu/the-strengths-and-weaknesses-of-jihadist-ideology/. This action was based on a doctrine controversial even among jihadists called "chain *takfir,*" in which one may declare apostasy on someone else when the latter refuses to join or properly conduct jihad or dissociate from non-Muslim groups.

51 Author interview with Craig Whiteside, December 2020.

52 Author interview with U.S. military officer, November 2020.

53 Husham Al-Hashimi, "ISIS in Iraq: The Challenge of Reintegrating 'ISIS Families,'" Newlines Institute, July 7, 2020, https://newlinesinstitute.org/isis/isis-in-iraq-the-challenge-of-reintegrating-isis-families/.

54 Author interview with Vera Mironova, November 2020.

55 Author interview with U.S. SOF officers, November–December 2020.

56 For more information on Captagon, see Cody J. Wenthur, Bin Zhou, and Kim D. Janda, "Vaccine-Driven Pharmacodynamic Dissection and Mitigation of Fenethylline Psychoactivity," *Nature* 548, no. 7668 (August 2017): 476–79, https://doi.org/10.1038/nature23464.

57 Paul Kan, "This Is Your Jihad on Drugs," *War on the Rocks*, March 7, 2016, https://warontherocks.com/2016/03/this-is-your-jihad-on-drugs/.

58 Author interview with U.S. SOF officer, December 2020.

59 Author interview with U.S. SOF officer, January 2021.

60 Author interview with Brig. Gen. Matthew C. Isler, March 2021.

61 Particularly in the case of the Iraqi army, poor morale was a preexisting result of government corruption and politicization of the armed forces. IS assassinations, intimidations, and other shaping operations still made the situation much worse.

62 Sylvia Westall and Ayla Jean Yackley, "Kurds Push Islamic State out of Kobani After Four-Month Battle," Reuters, January 26, 2015, https://www.reuters.com/article/us-mideast-crisis-syria-kobani/kurds-push-islamic-state-out-of-kobani-after-four-month-battle-idUSKBN0KZ1F920150126.

63 Yasmin Faruki, Jenna Gowell, and Laura Hoffman, "ISIS's Wilayat Sinai Launches Largest Offensive in Sheikh Zuweid," Institute for the Study of War, July 2, 2015, https://bit.ly/3r8I34r; Zack Gold, "Salafi Jihadist Violence in Egypt's North Sinai: From Local Insurgency to Islamic State Province," International Centre for Counter-Terrorism–The Hague, April 14, 2016, http://dx.doi.org/10.19165/2016.1.03; "Assault in Sheikh Zuweid: A Turning Point in Egypt's Fight Against Terrorism," Tahrir Institute for Middle East Policy, July 2, 2015, https://timep.org/commentary/analysis/assault-in-sheikh-zuwaid-a-turning-point-in-egypts-fight-against-terrorism-2/.

64 David M. Witty, *Iraq's Post-2014 Counter Terrorism Service*, Policy Focus 157 (Washington DC: Washington Institute, 2018), 5, https://www.washingtoninstitute.org/policy-analysis/iraqs-post-2014-counter-terrorism-service.

65 Knights, "ISIL's Political-Military Power," 1–2, https://www.ctc.usma.edu/wp-content/uploads/2014/09/CTCSentinel-Vol7Iss85.pdf.

66 Ibid., 2; Michael Knights and Alexander Mello, "The Cult of the Offensive: The Islamic State on Defense," *CTC Sentinel* 8, no. 4 (April 30, 2015): 1–6, https://www.ctc.usma.edu/the-cult-of-the-offensive-the-islamic-state-on-defense/; and Hashim, Caliphate at War, 209–11.

67 Knights and Mello, "*Cult of the Offensive*," 4, https://www.ctc.usma.edu/the-cult-of-the-offensive-the-islamic-state-on-defense/.

68 Especially in the Islamic State's earlier advances, the group often targeted areas where it knew enemy forces were already brittle, such as Mosul, Fallujah, and parts of Ramadi.

69 For example, in its defense of Mosul, IS built up impressive defenses of concentric firing positions, including snipers, antitank teams, mortars, and prepositioned weapons and ammunition caches. IS made ample use of SVBIEDs to hit advancing enemy columns, significantly delaying and demoralizing them. The group used human shields, tunnels, smokescreens from burning tires, oil wells, and sulfur piles, and "mouseholing" (creating an opening to connect two buildings) in rows of houses in attempts to avoid airstrikes. However, severely outnumbered, surrounded, and drawn into prolonged combat, IS was still vulnerable to

airstrikes, which often hit high-value targets, and the group had to rely heavily on SVBIEDs in the more open areas like parks to only briefly and locally regain the tactical initiative and conduct limited counterattacks. For reconnaissance, IS could no longer rely on its aggressive infantry patrolling, allowing its adversaries far more freedom of movement. It did adapt, using drones to gather intelligence, but this innovation did not have the same impact. See Loaa Adel, "Coalition Airstrike Kills 12 IS Militants in Eastern Mosul," *Iraqi News*, December 29, 2016, https://www.iraqinews.com/iraq-war/coalition-airstrike-kills-militants-mosul/; Loaa Adel, "Airstrike Kills Two Senior Leaders of Islamic State in Central Mosul," *Iraqi News*, January 19, 2017, https://www.iraqinews.com/iraq-war/airstrike-kills-two-senior-leaders-islamic-state-central-mosul/; and Michael Knights and Alexander Mello, "Defeat by Annihilation: Mobility and Attrition in the Islamic State's Defense of Mosul," *CTC Sentinel* 10, no. 4 (April 14, 2017): 1–7, https://ctc.usma.edu/defeat-by-annihilation-mobility-and-attrition-in-the-islamic-states-defense-of-mosul/.

70 Author interview with U.S. SOF officer, November 2020; author interview with former U.S. intelligence officer, November 2020; author interview with U.S. military officer, November 2020; and author interview with U.S. SOF officer, December 2020. Overall, IS tactical proficiency varied considerably among different units, though multiple U.S. service members with experience fighting the group said in interviews that the combat skills of individual fighters, such as marksmanship and use of cover, were largely low quality, with one describing them as no better than "your average backyard militia." There were exceptionally good fighters, like certain groups of foreign fighters—the Chechens and other Russian speakers in particular—though there also appear to have been exceptionally bad units, even among the foreign fighters.

71 Author interview with U.S. SOF officer, November 2020; and Pollack, *Armies of Sand*, 499–501. In the Islamic State's earlier advances, it demonstrated solid logistical capabilities, quickly shifting forces over long distances between Iraq and Syria. Airstrikes began to seriously impede this capability during the group's June 2014 advance on Baghdad, and it had to rely more on prepositioning

supplies. Over time, its interior lines of communication became increasingly dangerous to traverse, to the point where it had difficulty providing water to some areas.

72 Among the innovations IS made were heavily armoring, camouflaging, and route-guiding SVBIEDs. IS engineers attached metal plating and slats to civilian vehicles to up-armor them and painted cars with fake windows and certain colors to help them blend in with their surroundings. The group innovatively used drones and motorcyclists to guide SVBIED drivers with real-time information on route obstacles and target whereabouts. See Robert J. Bunker, "Daesh/IS Armored Vehicle Borne Improvised Explosive Devices (AVBIEDs): Insurgent Use and Terrorism Potentials," (TRENDS Research & Advisory, February 2, 2016), https://core.ac.uk/download/pdf/148362649.pdf; Hugo Kaaman, "Car Bombs as Weapons of War: ISIS's Development of SVBIEDs, 2014–19," Policy Paper (Middle East Institute, April 2019), https://www.mei.edu/sites/default/files/2019-04/Car_Bombs_as_Weapons_of_War_0.pdf; and Knights and Mello, "Defeat by Annihilation," 4, https://ctc.usma.edu/defeat-by-annihilation-mobility-and-attrition-in-the-islamic-states-defense-of-mosul/.

73 Barfi, "Military Doctrine of the Islamic State," 19, https://ctc.usma.edu/the-military-doctrine-of-the-islamic-state-and-the-limits-of-baathist-influence/.

3

IS Performance in Conventional Operations

In early June 2014, four of the Iraqi army's fourteen divisions collapsed virtually without a fight and Islamic State fighters came within twenty-five kilometers of Baghdad airport, taking important cities like Mosul, Fallujah, Sinjar, and Tikrit.[1] Aggressive IS raids probing Iraqi forces caused many soldiers to abandon their positions, don civilian clothing, and flee.[2] On the one hand, the Iraqi security forces (ISF) were unprepared for the IS advance, having undergone years of "hollowing out" by the government of Prime Minister Nouri al-Maliki, which sidelined competent military officers, promoted incapable cronies who would pursue his desired political ends, neglected logistics[3] and training, and alienated Iraq's Sunni population.[4] One U.S. Special Operations Forces officer recalled that in 2014, "Iraqi soldiers thought it was a death sentence to be sent [to the frontlines] because they weren't going to be given what they needed to fight."[5] On the other hand, IS had coopted some of Iraq's Sunni tribes and communities and infiltrated the ISF, leading to mass desertions and defections from the ISF and increased popular and militia support for IS.[6] These factors led to easy successive victories for IS in northern Iraq, with Mosul, Iraq's second-largest city, falling within a matter of days when two Iraqi army divisions with about twenty thousand troops collapsed before a force of merely several hundred IS fighters.[7]

The June 2014 campaigns by IS exemplified its offensive operational style, which relied on shaping operations to weaken targets by using tribal

engagement and coopting local populations. IS then kept weakened adversaries off-balance by taking the initiative and constantly attacking them until finally breaking them. Drawing on significant organizational capacity and innovations, IS mustered larger forces and many suicide vehicle–borne improvised explosive devices for assaults when needed to deliver the sharp blows that would defeat adversaries. Because it retained its high will to fight, IS achieved a significant edge in fighting power, overwhelming demoralized defenders, even those enjoying numerical superiority. More determined adversaries like Iraq's Counter Terrorism Service (CTS) or the Syrian Kurdish People's Defense Units (YPG), not demoralized by shaping operations and other efforts, offered staunch resistance that IS had far more difficulty overcoming. Hence, on the offensive, IS favored long shaping operations preceding fast-paced assaults with motorized and dismounted infantry and SVBIEDs to break its adversaries' will to fight. The text examines the Islamic State's attacks on Ramadi, Iraq, and Kobane, Syria, as cases of IS offensive style.

On the defensive, IS continued to emphasize breaking adversary willpower but could not rely on shaping operations or retaking the initiative. In military operations, the defender is effectively stripped of the initiative, thus preventing IS from choosing and shaping the battlefield beforehand. Consequently, IS defensive operational style relied on brutalizing and imposing such high costs on attackers that they would abandon their efforts. Organizational capacity and determination came to the forefront as IS designed complex defensive tactics and fortifications to shock attacking forces with waves of SVBIED-led counterattacks, heavily booby-trapped buildings, sizable emplaced IED minefields, use of civilians as human shields, and well-trained sniper, antiarmor, and *inghimasi* teams (shock troops who would detonate their suicide belts if cornered).[8] Terrifyingly fanatical IS defenders shocked attackers, challenging the latter's willingness to press the attack. However, IS ultimately could not hold any of its major possessions against determined efforts to dislodge the group and attained only limited successes in its minor defenses. The IS stands at Mosul, Iraq, and Baghuz, Syria, will be examined later in this chapter as cases of its defensive operational style.

The Ramadi Offensive, January 2014–May 2015

The IS campaign to seize Ramadi showed the group at its best militarily, capping a long tribal engagement effort and featuring an operational-level encirclement of the city. SVBIED strikes applied at critical moments punctuated the morale advantage the jihadist group held over its increasingly weary foes, a rare instance of IS victory over CTS forces.

The Anbar Campaign

Even before the Islamic State's June 2014 offensives, the group made substantial gains in Iraq's Sunni-majority Anbar governorate. Leveraging jihadist connections to major Anbar areas established earlier by al-Qaeda in Iraq/Islamic State of Iraq, IS quickly took control of many towns and cities in late 2013 and early 2014. In January 2014, the group made its first major gains in Iraq, conquering Fallujah, al-Karmah, and other cities and towns. At Ramadi, the Anbar capital, IS took over parts of the city but met determined resistance from the elite Counter Terrorism Service special operations units, seen by many U.S. advisors as the only effective elements of the ISF,[9] which stalemated the fight for sixteen months.[10] The ensuing battle would see IS deliver its best offensive performance.

Until December 2014, IS waged a semi-conventional campaign to strengthen its position inside the city, including hit-and-run attacks and ambushes to weaken Iraqi forces and stop them from fully securing neighborhoods where the group maintained a presence.[11] It simultaneously conducted offensives on surrounding areas, such as its failed June 2014 Samarra attacks, which involved an IS convoy of dozens of vehicles.[12] As Ramadi was further isolated, IS shifted to conducting conventional assaults in the city itself, launching a final sharp offensive that brought its May 2015 victory in Ramadi. And, notably, IS achieved this win despite the entrance of U.S. air support for the ISF from August 2014.[13]

Coopting Anbar's Population

IS attempted to coopt Anbar's population through a mix of tribal engagement, assassinations, and sleeper cells.

Tribal Engagement

The Islamic State's tribal engagement in the Anbar campaign marked the culmination of years of insurgent activity. AQI/ISI had maintained a presence in Ramadi, Fallujah, and other Anbari cities since 2003.[14] The group's attitude toward the tribes evolved, at times favoring a hardline approach of punishing those who rejected the jihadist ideology or a more tolerant one of diplomatic engagement. The oft-cited "Analysis of the State of ISI," an assessment of ISI's organizational problems by a member of the group, repeatedly discussed the shortcomings of its tribal engagement, including the failure to defeat U.S. efforts to win the tribes' support.[15] By the start of 2014, IS operatives had embedded themselves more deeply in Anbar and developed a plan to deal with the tribes.

IS had been preparing for its Anbar offensives for years by gaining the cooperation or acquiescence of local Sunni tribes. Between 2012 and 2015, IS forged ties with parts of the Anbari tribes of Jamilat, al-Meshahedah, Halabsah, Albu Issa, and al-Janabat, among others, as well as many more tribes in the surrounding Sunni regions of Salah al-Din and Nineveh.[16] IS offered cooperating tribes autonomy, power, and economic opportunity in oil, transportation, and other businesses in return for assistance with governance and manpower.[17] When IS attacked al-Qaim, an Anbari city near the Syrian border that would facilitate the jihadist group's movements from its Syrian territories and help isolate Ramadi, the Albu Karbuli and al-Salmani tribes provided IS with fighters to help weaken their local rival and IS opponent, the Albu Mahal. In return for keeping the weapons and vehicles they recovered from the fighting, Albu Karbuli and al-Salmani tribesmen helped IS maintain security in the city.[18] After the liberation of areas from IS control, identifying pro-IS tribal sheikhs became a significant concern for security forces, such as in the April 2016 retaking of Hit.[19]

Neither did IS hesitate to punish tribes that stood against it. In 2013, IS conducted a terrorist campaign against Sunni tribes all over Iraq to intimidate tribal leaders into acquiescence.[20] In 2014, IS executed more than six hundred members of the Albu Nimr, which had opposed IS and its predecessors since 2007 and contributed fighters to defend Ramadi against it.[21] At the same time, IS emphasized that tribes opposing it could "repent," releasing a video in April 2015 showing sheikhs pledging allegiance to IS.[22] In the July 2014 issue of the Islamic State's *Dabiq* magazine, the group claimed, "320 members of the army, police and *sahwat* [tribal groups opposed to IS]... repented."[23]

Assassinations

Anbar was home to many of the tribes that fought against the Islamic State's predecessors during the *sahwa* (awakening), or U.S.-backed Sunni uprising against Iraqi insurgent forces during the American occupation of Iraq. IS waged a deliberate campaign of assassinations to eliminate pro-government tribal elements and make the latter more amenable to IS cooptation,[24] with the group claiming the killings of 2,300 *sahwa* members between 2008 and 2013.[25]

IS also frequently targeted its adversaries' military leaders in the Ramadi area to sow confusion and demoralize them. In June 2014, the group killed a senior Iraqi commander in the city.[26] In October 2014, IS assassinated Iraqi general Qais Turki in the town of Amiriyah.[27] In December 2014, IS killed ISF commander of the Rapid Response Regiment Ihsan Ahmed.[28] In March 2015, IS destroyed an Iraqi army headquarters in the Albu Diab neighborhood of Ramadi with IEDs detonated from a tunnel dug by IS beneath the building, killing more than forty soldiers.[29] That same month, IS overran the Iraqi army's Brigade 26 headquarters in the Tharthar area near Fallujah.[30] These killings caused serious confusion among Iraqi units, with one video showing a police officer complaining, "It is a pity that there is no coordination between the units. The forces are being maneuvered by whoever is available. There was no discipline among the forces."[31]

Sleeper Cells

IS installed sleeper cells behind enemy lines in Ramadi and elsewhere in Anbar to surprise and strain defenders during assaults. These cells were composed of dozens of city locals recruited by IS during its campaign to smuggle in weapons and gather intelligence on ISF positions.[32] Sleeper cells participated in the Islamic State's final offensive on the city in May 2015, when it captured Ramadi's government buildings.[33] At Hit and Haditha, strategic towns located on the road connecting the jihadist group's Syrian territory to Ramadi, IS inserted sleeper cells disguised as IDPs, who later assisted with the group's attacks on these towns.[34]

Robust Organization

Robust IS organization during the campaign was rooted in the quality of its operational coherence and tactical coordination.

Operational Coherence

The Islamic State demonstrated a high level of coordination and coherence at the operational level throughout the fight for Ramadi. As the Institute for the Study of War showed, IS gradually bolstered its position inside the city by securing towns located along the approaches to Ramadi.[35] The group seized al-Qaim, Hit, Rawa, Ana, and other populated areas along the approaches from the Syrian border. In one instance, this control in the region enabled IS to transfer approximately three thousand fighters from its Syrian territories to Iraq,[36] a big manpower boost that allowed the group to conduct larger assaults.[37] After taking strategic locations, IS would use them as launchpads for "pinch" maneuvers, such as its seizure of Bayji city by forces advancing on three axes from al-Qayyara, Hawija, and Tikrit.[38]

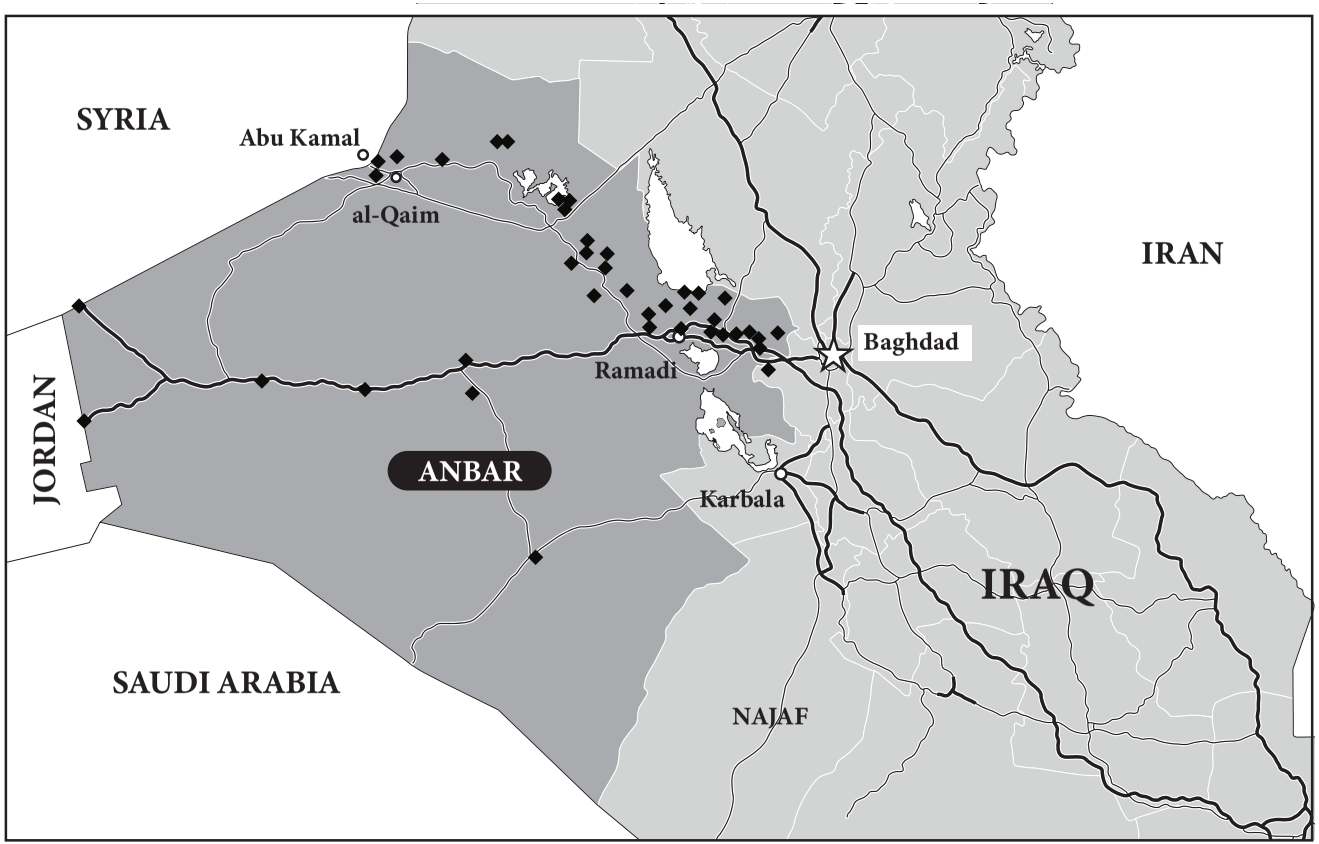
IS attacked positions in other theaters of operations to spread the ISF thin. The group's stunning occupation of Mosul and Tikrit, as well as its capture of Sinjar[39] and Tal Afar[40] and unsuccessful storming of Samarra, presented

the ISF with problems on multiple fronts.[41] The May 2015 issue of *Dabiq* told of a similar operation in April that overran the ISF's "4th Regiment Base,"[42] which the group touted as "very important as it connects together four *wilayat*. It connects [northern] Baghdad and Salahuddin with al-Anbar and al-Fallujah."[43] That is, IS viewed this operation as important for cutting off Baghdad and Salah al-Din, where the ISF dominated, from those in Anbar and Fallujah, where IS was in control (see figure 3.1 for violent incidents in Anbar). These attacks facilitated the Islamic State's attacks in Ramadi. The group gave the tactic doctrinal status in its February 2015 issue of *Dabiq*, in a reprinting of an essay titled "Advice for the Leaders of the Islamic State," originally authored in 2007 by an ISI war minister:[44] "Feigning an intent to attack an area other than the actual target, for when the Prophet (*sallallahu alayhi wa sallam*) wanted to attack one area, he would give his army the impression they were going to attack another."[45]

IS translated its isolation of Ramadi into a strategic gain in its final assault of May 2015. In March, the ISF and coalition committed thirty thousand troops to retaking Tikrit, the capital of Salah al-Din governorate.[46] This decision reduced the force that the ISF could invest in ousting IS from Ramadi.[47] In addition, during the two weeks before its final attack on Ramadi, IS conducted assaults on Bayji oil refinery, Baquba, Baghdad, and other important locations, tying up the ISF's remaining forces.[48] Thus, with the ISF concentrated on Tikrit and bogged down elsewhere, IS reinforced its position in Ramadi to take it by May 17.[49] This success delivered a "spoiling attack" because it delayed for more than a year Iraqi and coalition plans[50] for an operation to retake Mosul.[51] The coordination and foresight IS demonstrated in its isolation, reinforcement, and taking of Ramadi revealed the group's organizational prowess up to the operational-strategic level.

The Islamic State's aggressive prolonged campaign in Anbar exhausted the defenders of Ramadi. Constant hit-and-run attacks and SVBIED strikes, sometimes delivered from multiple directions, strained the ISF's sustainment capabilities and forced Iraqi units to stay in their positions as Ramadi became increasingly isolated. Depleted ammunition and manpower made the ISF reluctant to take the initiative against IS, which then took the opportunity to emplace IEDs closer to Iraqi positions. One Iraqi soldier recalled,

Figure 3.1 Violent Incidents in Anbar, 2014–15



"I heard my officer interrogating [an IS member] how they manage to plant IEDs between our watchtowers when they are just 100 meters apart? One replied saying, 'We flash our light toward the tower. We know there are only 28 soldiers, that they are in five hours shift rotations and there is a lack of ammo. If a soldier doesn't fire at us, we crawl and plant the bomb.'"[52]

Tactical Coordination

At the tactical level as well, IS showed a high degree of organizational strength, most notably in its final May 2015 assault in Ramadi. The group launched its push on May 14, naming its operation the "Battle of Abu Muhannad al-Suwaydawi."[53] IS unleashed armored bulldozers to breach barricades followed by no fewer than ten armored SVBIEDs hitting important government buildings.[54] During the final attack, IS used a total of up to thirty armored car bombs, including at least six fifteen-ton armored trucks, in one instance collapsing an eight-story building housing ISF soldiers.[55] IS boasted in its May issue of *Dabiq* that the opening suicide attacks struck the "'Anbar Provincial Council' building, the Anbar police administration building, the Anbar operations command center, the stadium area, the 8th [Iraqi army] Brigade base, and the 'counterterrorism' administration."[56] Therefore, IS chose specific targets to employ its resources against to target the ISF's center of gravity.

IS used low-visibility conditions to protect its advances. U.S. SOF officers frequently mentioned the jihadist group's use of night raids and bad weather like fog to avoid coalition surveillance.[57] At Ramadi, it was a sandstorm that covered the IS attackers, leading a senior U.S. military official to remark, "The dust storm at the very least neutralized capabilities that could have been decisive."[58] In fact, U.S. Central Command press releases reported only three airstrikes during the critical May 14–15 period of the battle,[59] an insufficient amount to stop IS VBIEDs and follow-on attacks.[60] By the time the sandstorm subsided, the fall of Ramadi was a fait accompli. Thus, IS ensured that its most important offensive assets—its SVBIEDs—had proper protection in the operation.

Holding the Initiative

The Islamic State's sharp operational strikes fed back into its tactical restlessness. The offensives of 2014 leading up to its drive to Baghdad gave IS considerable operational momentum that allowed it to fight on its own terms throughout the Ramadi campaign. Virtually anywhere the ISF offered resistance, IS countered with strikes in other theaters, constantly keeping the Iraqi forces on their toes.[61] Counterterrorism scholar Daveed Gartenstein-Ross noted that in some cases, these efforts amounted to costly "human wave" attacks that "failed to achieve appreciable gains and in fact eroded some of the group's advantages."[62] Indeed, such attacks, like the one on the town of Baghdadi in October 2014, were tactically unsophisticated frontal assaults compared to the well-planned May 2015 assaults in Ramadi, but they still diverted ISF troops.

Quick shifting of forces from Syria to Iraq enabled IS to sustain its constant strikes. The entrance of coalition airpower presented a problem for IS logistics, but as the group gained contiguous territory in late 2014, the relatively limited scope of the air campaign at the time could not hope to cover all of the jihadist group's major supply lines.[63] The U.S. military had yet to deploy joint terminal attack controllers (JTACs) in forward positions to inform air operations, instead relying on aerial video imagery for targeting.[64] Munitions release authority was reserved at high levels of command, requiring approval from a general officer far away from the frontlines or even President Barack Obama himself.[65] Restrictive rules of engagement coupled with the Islamic State's frequent use of civilian vehicles to transport fighters and materiel and the organization's tendency to travel in small groups further complicated coalition targeting.[66] In Ramadi's urban terrain, palm groves, and vegetated riverine outskirts, various friendly actors, including Iraqi army, CTS, police, and tribal forces, fought IS with limited abilities to coordinate with each other, let alone air assets. With IS fighters dispersed and embedded in various neighborhoods and no clear frontline, it was difficult to differentiate hostile and friendly positions from the air.[67] As a result, IS enjoyed considerable freedom of movement within Ramadi and its contiguous interior lines of communication.

High Fighting Power

As in virtually all subsequent campaigns, IS fighters demonstrated a high will to fight in the offensives on Ramadi and other places in Anbar. The Islamic State's repeated frontal attacks exhibited overzealousness and a willingness to advance under fire.[68] A journalist who spoke with CTS personnel present at the Ramadi battle reported that IS members fought hard and demonstrated a degree of professionalism.[69] At the same time, some fighters may have advanced out of respect for, or fear of, their commanders. For instance, a video showing the August 2013 IS assault on the Syrian military's Menagh Air Base featured squad-sized groups advancing on foot toward Syrian positions, at times with unit commanders sprinting at the front of an advance.[70] A senior Chechen IS leader known as Omar al-Shishani led many of the major operations in Anbar and Syria, and forces associated with his commanders became known for conducting bold frontal assaults.[71]

Another source of fighting power may have been the localized composition of IS fighters in Anbar. The IS cadre that led the fight on the ground appears to have consisted mostly of Ramadi or Anbar locals who had long supported the jihad in Iraq and desired to see the city come under IS control.[72] These members brought important ideological commitment and professionalism to the fight. IS commander Shaker Wahib (Abu Wahib) al-Fahdawi al-Dulaimi exemplified such a fighter; he was probably an Anbari member of the local al-Dulaimi tribe and was detained from 2006 to 2012 with other jihadists, first at the U.S. detention center Camp Bucca and then Tikrit Central Prison, before escaping during the 2012 ISI attack on the prison.[73]

Morale was high among IS fighters as the organization won victory after victory and declared the restoration of the Caliphate in June 2014. Videos of captured equipment and vehicles, black flags being hoisted over conquered lands, and rejoicing fighters urging others to join the jihad pervaded IS propaganda.[74] Improved supply lines meant easier reinforcement of IS positions in Ramadi, likely a boost for the attackers' morale, especially when their adversaries' logistical capabilities became increasingly hamstrung by IS assaults around the city.

Money could have been another motivator for IS fighters. At the time,

Islamic State victories brought spoils that the group distributed through its Diwan al-Fay wal-Ghanaem (Department of War Spoils). An IS member known as Abu Tayyiba Qasura al-Quraishi claimed in a 2019 work called "Removing the Mask from the Descendants of Belam" that fighters who participated in the seizure of Mosul received $2,000, as well as "18 pieces of furniture and necessities for the house for every participant."[75] He also mentioned fighters at Deir al-Zour receiving $2,500 while those at Taji and Abu Ghraib, smaller operations, got a bonus of $200. Also, the Ramadi battle was strategically important and successful, so the group may well have offered generous rewards for fighting there.

IS Performance

At Ramadi, the Islamic State showed it could execute a conventional campaign at a high level:

- Shaping-the-battlefield efforts like tribal engagement and assassinations degraded enemy forces before battle.

- IS attacks throughout Anbar and other theaters supported the isolation of Ramadi and reinforced IS positions, reflecting operational-strategic coherence in the organization.

- The choice of multiple high-value targets for SVBIEDs in the group's final assault reflected strong tactical coordination and situational awareness.

- Secure interior lines of communication sustained high IS strike capabilities, enabling the group to retain the initiative and keep the ISF on its toes.

IS would continue performing impressively but not on the level it did in Ramadi. This battle was IS at its zenith, with evidence of military acumen up to the strategic level. The group created favorable conditions for itself, demoralizing its adversary, securing supply lines, and successfully evading airpower when it could have become a hindrance to IS operations. These

factors enabled IS to strengthen its presence in Anbar over time and deliver the coup de grâce to the ISF in Ramadi.

However, an intensifying anti-IS air campaign, coupled with IS adversaries emboldened by U.S. advisors and increasing victories, began to disrupt the Islamic State's territorial contiguity and its ability to sustain offensive maneuvers. IS positions would become progressively fixed and isolated from one another, to the point that by the time the ISF arrived to retake Mosul in late 2016, IS could virtually no longer reinforce its positions the way it did in Ramadi. This process would begin with its defeat at Kobane.

The Battle of Kobane, September 2014–March 2015

The battle for control of Kobane, although costly for both sides, resulted in the Islamic State's defeat by predominantly Kurdish forces, with crucial air support from the U.S.-led international coalition.

The IS War Against the Kurds

By June 2014, the Islamic State seemed to be on a winning streak and was approaching the gates of Baghdad. The battle for Ramadi was still raging while Fallujah, Mosul, and multiple Anbari cities had fallen with the collapse of five Iraqi army divisions and one Federal Police division. The group also established itself in Raqqa, Aleppo, Manbij, and elsewhere in Syria. In a September 2014 video, "Flames of War," IS proclaimed the defeat of its "apostate" enemies, including the Iraqi and Syrian militaries, the Syrian rebel coalition known as the Free Syrian Army (FSA), and Iraqi Sunni tribal *sahwa* militias, among others.[76] A plethora of equipment left behind by defeated foes meant that IS now had heavy weapons like artillery, antitank guided missiles (ATGMs), armored Humvees, and main battle tanks,[77] prompting then deputy assistant secretary of state for Iraq and Iran Brett McGurk to state that the Islamic State is "no longer a terrorist organization. It is a full-blown army."[78]

Flaunting its victories, IS portrayed its dominance as a fait accompli that the world would have to accept. Efforts to counter it, particularly the nascent U.S.-led air campaign, were a "failed crusade."[79] Bashar al-Assad's regime and Syrian opposition groups, as well as the Arab tribes and Iraqi government, were all searching for "justifications for sin and [apostasy]."[80] These and other groups IS considered apostates tried to "trick the secularists and crusaders [the United States and its allies] into arming them… commit[ting] *kufr* [apostasy] for the sake of military aid."[81] The errors of their ways, IS claimed, planted the seeds of their demise as IS captured much of the U.S.-made equipment provided to the group's adversaries, hampering efforts to stop IS since now "proxy fighters need to be filtered to make sure any weapons and aid sent by the [United States] do not end up in the hands of its enemies."[82] Therefore, "the cowardly crusaders are left without real ground troops and thus forced to rely fully on airstrikes…the only time airstrikes alone succeeded in determining the end of a war was the airstrikes of Hiroshima and Nagasaki!"[83] According to IS, the air campaign was already a failure and the group's repeated successes in Iraq and Syria up to late 2014 further proved it.

The group set its sights on Kurdish armed groups to add credibility to this claim, and its main target would become Kobane, a Kurdish town of about fifty thousand inhabitants hugging the Turkey-Syria border on the eastern side of the Euphrates River.[84] IS outlined its goals for the offensive on Kobane in its October 2014 issue of *Dabiq*, "Aynul-Islam [Kobane] was the major focus of the Islamic State because it was determined the PKK [Kurdistan Workers Party] would be the main ally of the crusaders in this stage of their crusade due to the supposed battle experience of PKK fighters and the purely secularist ideology of their party."[85] Thus, IS asserted its war on the Kurds was meant to preclude the expansion of the international air campaign against it.

Before attacking Kobane, IS attempted to eliminate the Iraqi Kurdish Peshmerga from the war. The Peshmerga forces collapsed like the Iraqi army did in its first engagements with IS but managed to hold their ground deeper in Kurdish territory in August 2014, after losing Sinjar and being forced to the outskirts of Makhmur when IS attacked with its newly acquired arsenal.[86]

While the Peshmerga initially lacked the heavy weapons IS brought to bear, the crucial entrance of U.S. airpower that month enabled the Kurds to retake Makhmur and eventually push the frontline back to Sinjar near the Syrian border.[87] German provision of Milan antitank guided missile launchers, along with other armor-piercing weapons, machine guns, and vehicles, to the Peshmerga would later help the latter repel armored IS assets.[88]

After Makhmur and other limited brushes with U.S. aircraft,[89] IS professed its determination to limit the air campaign by destroying the possibility of Syrian Kurds becoming partners of the Global Coalition to Defeat ISIS (the coalition), which the United States inaugurated on September 10, 2014.[90] The YPG, a Kurdish militia founded by members of the PKK, together with the Kurdish all-female Women's Protection Units (YPJ), had held Kobane since Syrian military forces abandoned it in July 2012 as part of a YPG effort to unify the Kurdish regions of Syria amid the civil war.[91] By September 2014, the YPG had fended off two IS attacks on Kobane: one in July 2013 meant to stop the expansion of Kurdish territory and another in March 2014 to break up a new alliance between the YPG and formerly IS-allied FSA elements.[92] In September, IS returned in force with the equipment it captured from the Iraqi army. A month into the offensive, IS reaffirmed its profession of the futility of the air campaign: "Aerial bombardment from America and its coalition failed to hinder the advance."[93]

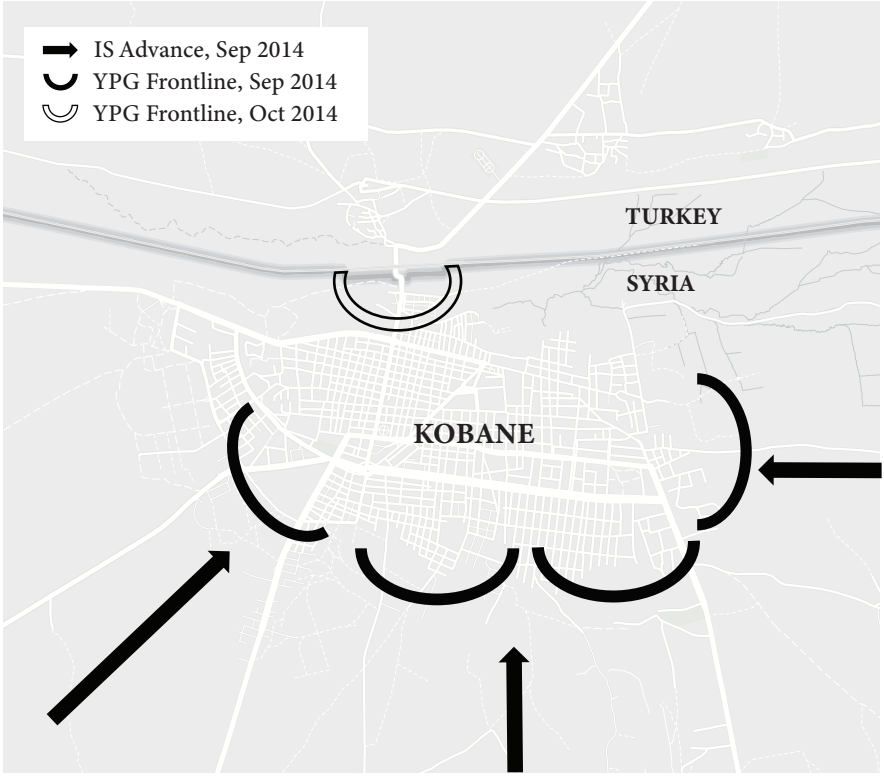
Force Ratios and the Kobane Battlefield

The battle of Kobane featured IS at its most conventional (see figure 3.2 for a map of the battle). According to an Iraqi Peshmerga official, as well as Azad Cudi, a YPG sniper present at Kobane for the duration of the fight, IS committed a force of 9,000–12,000 fighters[94] with small arms, ATGMs, heavy artillery and mortars, rocket launchers, armored personnel carriers and technicals, up-armored SVBIEDs, Humvees, and tanks. The group sent many of its elite foreign fighters into the fray,[95] including Chechens and Uyghurs, who had perhaps the most fearsome reputation of IS fighters.[96] Facing them were only some 3,000 YPG fighters with small arms, rocket-propelled grenades

(RPGs), and some "technicals" (fighters on armed pickup trucks).[97] During the battle, about 150 Iraqi Peshmerga fighters reinforced the YPG positions with heavy weapons via the Turkish border[98] and 50 to 200 FSA members joined the fight.[99] The Kurds' determined resistance to the IS onslaught won the coalition's respect, bringing the airstrikes that proved decisive to repulsing the jihadists. Overall, according to Mazloum Abdi, a YPG commander present at Kobane who later became head of the Syrian Democratic Forces, the YPG and YPJ sustained more than 4,200 casualties, including 1,253 dead.[100] McGurk, at that point U.S. special presidential envoy for the Global Coalition to Counter ISIL, estimated 6,000 IS members died in the fight for Kobane.[101]

The Kobane battlefield consisted of the seven-square-mile urban terrain of the town itself and the surrounding plains and hills. The Turkish border

Figure 3.2 Battle of Kobane



and Euphrates River bounded the northern and western edges of the battlefield, respectively. This entire battlespace comprised about 2,400 square kilometers that collapsed to an urban pocket of five-by-two kilometers by late October 2014, featuring intense close-quarter combat in the densely built town.[102] More than 350 villages on Kobane's outskirts also saw fighting. Notwithstanding regular infiltrations, frontlines were well defined and the civilian presence was minimal as most inhabitants fled the fighting, with opposing units often only across the street from each other inside the town and as far away as sniper range in the outskirts.[103]

Organized for Conventional Warfare

At Kobane, IS fielded thousands of fighters with tanks, heavy equipment, and crack battlefield commanders that together resembled a true conventional army.

Sound Planning and Leadership

At Kobane, IS massed a well-equipped division-sized force. The group used secure lines of communication and assembly areas to mass its units, armed with an assortment of weapons, particularly tanks, artillery, and ATGMs, that would allow it to raise its level of combined arms combat. One U.S. SOF officer recalled that IS used tanks "the way that the [United States] and the Russians would doctrinally use armor"—leading advances and softening up targets for infantry.[104] The officer noted that in 2013–14, the United States was providing limited air support to vetted elements of the armed Syrian opposition but IS tanks became a large enough threat that U.S. advisors "bought out the black market supply of Russian Kornet" ATGMs for vetted fighters to use.[105] In the Islamic State's initial advances on Kobane, when coalition air coverage was more limited, the group used tanks to lead the way in lone armor maneuvers into enemy territory[106] or with infantry following close behind.[107] IS videos released during the battle showed the group's use of ATGMs, recoilless rifles, mortars, artillery, and rocket launchers farther away from targets to support advances, or defensively from concealed and

camouflaged positions in the battle's later stages.[108] Hence, at least in its initial advance on Kobane, IS demonstrated combined arms capabilities, a sign of robust organizational capacity.

The IS trajectory of attack revealed a considerable degree of operational planning. IS columns struck Kobane concentrically on western, southern, and eastern axes.[109] These trajectories corresponded to three IS centers of activity at the time, namely Aleppo to the southwest, Manbij to the south, and Raqqa to the southeast of Kobane. Secure interior lines of communication from these areas and from Iraq, as well as the deluge of foreign fighters IS was receiving at the time, provided ample manpower for reserves and reinforcements that IS used as the battle progressed.[110] Throughout the entirety of the battle, IS retained these supply routes virtually uncontested.[111]

The Islamic State's crack leaders were involved in the planning and attacking of Kobane. The infamous Chechen IS chief of Syria operations Shishani stood out most prominently as an IS member the U.S. military was hunting because of his association with the forces that carried out the group's most successful operations in Syria and Anbar. In particular, Shishani was known among U.S. officers for his ability to effectively mass and coordinate large numbers of fighters and materiel in frontal assaults supported by SVBIEDs, a common feature in the Kobane battle and other operations at the time.[112] A senior member of the Islamic State's Religious Council named Othman al-Nazih was killed in Kobane, reflecting the group's integration of spiritual leaders into combat units to boost morale.[113] Also killed on the Kobane battlefield were prominent IS fighter Sultan al-Safri al-Harbi[114] and IS emirs Abu Ali al-Askari and Abu Muhammed al-Masri.[115] A well-known Chechen jihadist veteran of the Second Chechen War, Akhmed Chatayev, led a company-sized group of Russian-speaking fighters at Kobane.[116] This concentration of important IS members at Kobane shed light on the battle's significance to IS, as both decisive in countering the coalition air campaign and testing the group's reputation as nearly undefeated.

Failing to Engage the Kurds

Notably, IS had little success engaging the population around Kobane. On the one hand, it is not surprising, because Kurdish communities generally have held more secular nationalistic values. On the other hand, IS produced some propaganda meant to win over Kurdish audiences. For example, an article in the November 2014 issue of *Dabiq* titled "Unifying the Ranks" claimed "more than 30 Kurdish villages" in the Aleppo area gave *baya* (a pledge of allegiance) to the group.[117] It then quoted a statement from IS spokesperson Abu Muhammad al-Adnani saying, "We do not fight Kurds because they are Kurds. Rather we fight the disbelievers amongst them...The Muslim Kurds in the ranks of the Islamic State are many. They are the toughest of fighters against the disbelievers amongst their people." Also, IS prominently deployed an Iraqi Kurdish commander known as Abu Khattab al-Kurdi in the battle, possibly in an attempt to make the group more appealing to Kurds.[118] At any rate, IS efforts to coopt Kurdish communities made little headway compared to its northern Iraq tribal engagement campaign, and the jihadists really could not count on local support in their push to take Kobane.

Holding the Initiative

Although IS initially made rapid gains in Kobane with its newly acquired equipment, heavier materiel became a liability as the U.S.-led air campaign intensified.

Overwhelming Firepower

The Islamic State's large well-organized assault initially overwhelmed the YPG, allowing the jihadists to hold the initiative despite almost no support from the local population. Swift initial IS attacks, supported with superior firepower and materiel, rapidly secured the outskirts of Kobane, with 350 of 354 villages falling to IS by late September 2014.[119] During this time, IS used sledgehammer military tactics, pounding YPG outposts with tanks,

artillery, and mortars before mopping up with light infantry deployed in often superior numbers to the defenders. In this way, IS initially operated in Kobane similarly to how almost any conventional Arab military would against lightly armed opponents.

At the same time, IS continued executing its distinctive rapid strikes and ambushes supported by firepower and suicide attacks. During its assault on the strategic Mishtanour Hill early in the battle, the jihadists and Kurds were engaged in such close combat that a YPJ platoon commander named Arin Mikan was able to kill ten IS fighters when she famously charged the frontline carrying multiple grenades tied together that she detonated near them, also killing herself.[120] In the IS mid-October attack on the Kobane cultural center, the group first detonated three SVBIEDs.[121] Azad Cudi noted the fearful atmosphere surrounding the start of the battle of Kobane by recalling a brutal recent IS ambush at the town of Tal Hamis farther east:[122] "ISIS pretended they were retreating to lure two hundred and fifty of our men and women into an open field that they surrounded, then opened fire, tossed in hand grenades and finally waded through the bodies with swords, decapitating at will."[123] Despite the YPG's determination, there was little the Kurdish fighters could do to stop the advance, and IS captured and brutally executed many of them, as the YPG discovered when clearing the outskirts, with corpses of their fallen comrades still there.[124]

SVBIEDs remained an important element of the Islamic State's offensive power. Their role was primarily to punch holes in the Kurdish lines in preparation for storming with both mounted and dismounted infantry fighters.[125] Unique to Kobane, IS combined SVBIEDs with tank and artillery support as force multipliers for breakthroughs. The group also used drones for surveillance in Kobane but was not yet using them as explosive delivery platforms.[126] By late October, the IS onslaught forced the YPG into a tiny enclave against the Turkish border.[127] Thus, IS brought its distinctive fast-paced SVBIED-led assault style to bear with considerable supporting firepower from traditional heavy weapons like tanks and artillery.

Although tanks provided significant fire support for IS units in the initial Kobane advance, they did not remain an important part of IS offensives, mainly because of airpower from the group's opponents. The Islamic State's

more sophisticated use of tanks was confined to the battle's early days, when air coverage was lacking.[128] But in the open, hilly Kobane terrain, tanks became less useful and survivable as the coalition air campaign intensified. IS opted for hit-and-run tank attacks rather than be exposed to airpower in protracted engagements, though when tanks appeared, or threatened to appear, they still frightened YPG fighters.[129] By late 2015—during the IS defense of Ramadi—the group used tanks mostly to clear obstacles[130] for SVBIED attacks, sometimes attempting to conceal tanks from air coverage by hiding them inside buildings.[131]

Losing the Initiative Under Air Assault

In late October, it seemed Kobane would fall to IS. A YPJ leader named Meysa Abdo penned a *New York Times* op-ed on October 28, 2014, praising coalition air support and a U.S. supply drop of small arms and ammunition eight days earlier but admonishing, "None of that changes the reality that our weapons still cannot match those of the Islamic State. We will never give up. But we need more than merely rifles and grenades to carry out our own responsibilities and aid the coalition in its war against the jihadist forces."[132] The article was in response to Turkey's refusal to allow Kurdish reinforcements[133] into Kobane from across the border and objections to provision of heavier weapons.[134]

Nonetheless, U.S. officials began taking greater interest in an intensified long-term air campaign against IS. As then commander of U.S. Central Command Gen. Lloyd Austin said of Kobane, "As long as [the Islamic State group] pours legions of forces into that area, we'll focus on taking them out. My goal is to destroy ISIL. If [it] continues to present us with targets, then clearly we will service those targets, as we've done so very effectively as of late."[135]

This intensification against the Islamic State came in early November, after the crossing—allowed reluctantly by Turkey—of 155 members of the Iraqi Peshmerga bearing heavy weapons, including artillery, heavy machine guns, and armored vehicles.[136] Virtually no civilians remained in Kobane, despite IS efforts to discourage their departure with mortar and sniper fire directed at the Turkish border; thus, most concerns about airstrikes

harming civilians were alleviated.[137] The U.S. military cleared two Iraqi Kurdish Counter Terrorism Group members to operate Samsung Galaxy tablets to communicate coordinates for airstrikes, sometimes with the help of cellphones.[138] These tablets, along with input from YPG commanders, would facilitate the more than six hundred airstrikes on IS positions, enabling the Kurds to retake Kobane by destroying or suppressing IS armor and firepower.[139] The coalition increased its monthly weapons release rate (the number of bombs or other ordnance dropped/launched in airstrikes) from 211 in August 2014 to 1,867 in December 2014, almost a ninefold rise.[140] Indeed, the YPG integrated coordinated airstrikes into its daily clearing operations, which involved preliminary air bombardment and then house-to-house clearing of blocks. Cudi described his unit's strategy "to direct the warplanes to destroy the houses one or two blocks ahead of us to create a no-man's-land" during the day before mopping up the remaining positions at night.[141] Proceeding in this fashion, airpower ground down IS forces and the YPG took back the town by January 26, 2015, before going on to clear the outskirts. In subsequent propaganda, IS attributed its retreat to coalition airstrikes, further indication of the airstrikes' effectiveness.[142]

Counterattacks to Regain the Initiative

Fierce IS resistance punctuated by sharp counterattacks held back the YPG's advance. In one instance in November 2014, three SVBIEDs punched a hole in the YPG line. The follow-on assault consisted of ten fighters wearing suicide vests attempting to break through the line before detonating near groups of YPG members if unable to do so.[143] Mortar barrages coupled with snipers to pick off YPG members running for safety were also common.[144] Moreover, IS deployed tunnels and sometimes snap counterattacks during airstrikes to evade air attack or disrupt targeting for fear of friendly fire, respectively.[145] To hamper YPG advances, IS sometimes sent small groups of fighters in Humvees behind the Kurdish frontlines to cause as much chaos as possible.[146] Booby-trapped houses and corpses further impeded YPG clearances by forcing the Kurds to conduct house-to-house minesweeping operations.[147] However, these efforts only delayed the YPG's advance and

could not hope to make real gains while the coalition remained committed.

The Islamic State's staunch resistance well after the group clearly would not be able to hold Kobane begs the question of why IS persisted. One reason was its commitment to separate the YPG from the coalition. Its constant attempts to discredit the YPG as a viable fighting force and its assertion that the jihadists were defeated only by heavy airstrikes aimed to persuade the coalition that the YPG was incapable and staying in the fight would be exorbitant. In its November 2014 issue of *Dabiq*, IS highlighted "the PKK's impotence in fighting the Islamic State," continuing, "They were supported by a coalition that armed them, supplied them, reinforced them, and even provided them with almost daily air cover, but they still couldn't dislodge the mujahidin or even stop their advance. Indeed, the only thing that the *kuffar* [infidels] are likely to find more impressively baffling than the incompetence of the PKK, is Obama's decision to keep relying on the incompetence of the PKK."[148] In January 2015, IS released a video featuring a fighter in Kobane jovially proclaiming, "We are not afraid of the [coalition] airplanes. We are now so accustomed to sleeping when we hear them that we have trouble sleeping if we do not. Nothing can scare us. We know we will die only when God decides."[149] In the February 2015 issue of *Dabiq*, after IS lost Kobane, the group pointed to various Western news outlets, including the *Washington Post* and Fox News, that published material portraying the coalition victory at Kobane as a minor one earned only after great cost while IS advanced elsewhere. It also included an editorial claiming that increasingly intensive airstrikes and other "heavy-handed" measures were creating an "Anger Factory" that would infuriate Muslims around the world and prompt them to join IS, making the war against it even more hopeless.[150] However, IS persistence, and the Kurds' determined resistance, ultimately proved instead that the Kurds would be a good partner. One might compare this counterproductive outcome to the 1941 Japanese attack on Pearl Harbor that aimed to stop the United States from joining World War II but instead emboldened the Americans to join the war.

Another reason for IS to keep fighting was a hope that the coalition and YPG would not be willing to pay the price for victory. Indeed, the fighting destroyed at least half the town and took a heavy toll on the Kurdish

fighters.[151] The level of destruction the Kobane battle caused was still unprecedented in the coalition's fight against IS. Thus, it made sense that if the jihadist group perceived the West as reluctant to commit fully—as IS media statements suggested it did—then prolonging the battle would eventually break the coalition's will to fight. This competition of willpower was also a test of the Islamic State's reputation as mostly victorious, which a defeat at Kobane would challenge.

High Will to Fight

Throughout the battle of Kobane, IS fighters demonstrated a high will to fight. As Cudi noted in his memoir, "ISIS rarely retreated,"[152] and the first time he saw IS fighters fall back was during the YPG clearance of Kobane's outskirts, well after the hardest urban fighting.[153] Far more frequently, IS fighters would hold their positions tenaciously, to point of folly in some cases. In one instance in March, Cudi recalled seeing Chechen IS fighters reinforce a hill summit four times despite airstrikes vaporizing the position at each attempt.[154] In another in late March, a lone IS fighter held off the Kurds at Qeregoye Hill by pretending to resupply a position, causing the YPG to think there were many more jihadists.[155]

The presence of prominent IS leaders, particularly Shishani, was another source of motivation. Shishani was known for being able to field large groups of fighters for determined frontal assaults. For example, the August 2014 attack on Tabqa (aka al-Thawra) Air Base, led by Shishani, featured as many as two hundred fighters, with almost no support, advancing rapidly on the heavily defended Syrian military base, taking it in a matter of days when the soldiers decided to withdraw despite their better armament.[156] Later, during the YPG counteroffensive into Kobane's outskirts in February 2015, IS executed a similar mass advance, capturing 11 villages and taking more than 260 civilians hostage.[157]

The high proportion of foreign fighters at the battle reflected the jihadist group's will to fight. Chechen IS members had a reputation as tenacious fighters, seen in the aforementioned repeated attempts to reinforce positions

vulnerable to airpower as well as the loss of some two hundred men of Badr Katiba, a predominantly Chechen IS unit under the command of Chatayev.[158] After interviewing mostly Russian-speaking foreign fighters, Harvard visiting fellow Vera Mironova noted the higher number of "ultra-radicals" among them.[159] Notwithstanding tensions among foreign fighters and between them and locals,[160] U.S. officers frequently noted the fanaticism of the foreigners.[161] Indeed, foreign fighters would not be welcome in their home countries and could not melt away and blend in with Iraqi and Syrian communities. Fighting was often their only viable option.

IS Performance

The battle of Kobane showed that IS could effectively mass and direct forces in a truly conventional style. Yet it was arguably its most resounding defeat. The battle proved that the YPG was a reliable partner for the coalition, planting the seeds for the creation of the Syrian Democratic Forces under coalition tutelage and expansion of the air and train, assist, advise, and accompany campaigns. Previously reluctant countries alarmed by the Islamic State's successive victories now joined the coalition, including the Netherlands, Belgium, Britain, Turkey, Bahrain, Jordan, Qatar, Saudi Arabia, and the United Arab Emirates.[162] This outcome was the exact opposite of the jihadist group's stated goal of revealing that the YPG was weak and incapable.[163]

At the same time, IS lost thousands of combatants in the fighting, possibly six thousand (about 50–70 percent of the attackers) from airstrikes alone,[164] and much of its most advanced materiel, such as tanks and armored personnel carriers.[165] As then commander of U.S. Air Forces Central Command Lt. Gen. John W. Hesterman remarked, "The more they [IS] try to act like an army…they just reinforce failure, and we kill them at a very great rate."[166]

Overall, a number of factors characterize IS military effectiveness at the battle of Kobane:

- Swelling manpower, newly acquired military equipment, secure lines of communication, and sound leadership enabled IS to operate

in a truly conventional manner, massing a large force equipped with various arms that maneuvered in the open.

- Overwhelming firepower deployed against unprepared YPG defenders rapidly confined the latter to a small pocket of Kobane.

- The high will to fight of IS fighters cracked YPG defenses and brutalized the YPG, allowing IS to advance despite intensifying air support.

- Well-defined frontlines, minimal civilian presence, YPG ability to direct airstrikes, massed IS forces, and the open terrain of Kobane's outskirts augmented the coalition's capability to strike valuable IS targets, decisively eliminating the targets to make way for the YPG counteroffensive.

Kobane, perhaps most of all, displayed the limits of jihadist conventionalized fighting. One of the Islamic State's best mass formations could not defeat a small, underequipped, albeit highly determined, militia. Airpower turned IS armored assets into easy targets, and the group could do virtually nothing to protect its forces. It is ironic that in the group's most conventional performance, supposedly essential elements of mass forces like armor and heavy weapons became liabilities.

As in Ramadi, and later as IS developed better concealment tactics, the jihadists would find more success using primarily infantry and SVBIEDs in conventional battlefield settings. They would also continue to mount fierce resistance and counterattacks, forcing their adversaries to pay increasingly heavy prices to oust IS from their lands. The destruction of cities previously held by IS, heavy casualties for attackers, and brutalization of their personnel became common themes of the coalition partner forces' counteroffensives against IS. The coalition forces would pay the highest price in retaking the Iraqi city of Mosul from the jihadists.

The Defense of Mosul, October 2016–July 2017

Iraqi forces, supported by numerous coalition airstrikes, took Mosul, but a well-organized, zealous IS defense gave them one of their hardest fights.

IS Defensive Style

The Islamic State achieved low-cost gains from 2013 through 2014, but starting with the group's reversal at Kobane, its offensive power began to "culminate," or reach its limit, militarily.[167] As at Kobane, the Islamic State's operational tempo began suffering significantly from coalition airstrikes targeting supply routes and forward positions while its fighters drove toward Baghdad in late 2015. On the ground, elite U.S.-trained CTS forces, supplemented by elements of the Iraqi army and Shia-militia-dominated Popular Mobilization Forces (PMF), set up retrograde defensive positions. The IS advance ground to a halt and then turned to a retreat, with Iraqi forces recovering abandoned tanks and other vehicles in good condition, an indication that IS was no longer able to adequately supply its frontlines.[168] Several months earlier, in Iraqi Kurdistan, the northeastern extreme of its advance, IS was reversed at Makhmur by airstrikes and a determined force of Kurdish Peshmerga fighters.[169] At the same time, in Aleppo and Deir al-Zour,[170] major theaters of IS operations in northern Syria, the group's pushes to expand stagnated into long sieges broken eventually by Russian airpower and Assad-regime forces. Hence, by 2016, IS offensive capacity all but culminated on the strategic level because it could not always rapidly shift forces or quickly advance.

At the same time, counterattacks became a major feature of IS defenses as in Mosul, Baghuz, and other places, which were characterized by initial SVBIED strikes and then platoon- or company-sized follow-on infantry assaults. These counterattacks delayed and demoralized IS adversaries. Although the counterattacks concerned coalition and partner forces, IS

usually did not stop or completely reverse coalition offensives. Indeed, these counterattacks were minor operations compared to the counterpunch that IS delivered at Ramadi in May 2015, or at al-Qaryatayn in August 2015 against the Syrian military.[171]

In fact, IS planned for this strategic reversal. On the one hand, since May 2016, IS media outlets had begun articulating a survival plan based on what they termed in Arabic *inhiyaz*—or a temporary retreat—to desert regions, where the group would hone its strength to prepare for a comeback.[172] Accordingly, as security analyst Hassan Hassan noted, "Islamic State forces largely melted away from towns and villages" in both Iraq and Syria "rather than confront advancing Iraqi and Syrian forces."[173]

On the other hand, IS defended a handful of its holdings. Anti-IS forces encountered stiff resistance at Manbij, Raqqa, Mosul, Ramadi, and Fallujah, among other places. IS generally invested more in defending materially more valuable holdings, like Mosul, its largest city and biggest moneymaker; Raqqa, the official capital of the caliphate; and Manbij, an important transit, in-processing, and collection center for IS recruits and materiel.[174] In contrast, in Hawija and Tal Afar, smaller Iraqi towns, IS made little defensive effort, because these places had low strategic value.

When IS did choose to stand and fight, its religious doctrine strongly encouraged a fight to the death, not with the aim of permanently excluding the attackers but instead as a duty and show of strength. IS documents offered ideological justification for defense, framing the group's setbacks as a divine test to separate the true believers from the "hypocrites" (*munafiqin*) and "cowards."[175] Additionally, IS members fighting to the death to defend the caliphate gave credence to the group's veneration of martyrdom and claim to creating a legitimate Islamic state.

The Mosul Battlefield as an IS Defensive

In late October 2016, the ISF began the operation to retake Mosul, Iraq's second-most-populous city, which became the Islamic State's most significant defensive battle. After more than two years of preparation, IS fortifications

and defensive tactics would give attacking coalition-backed ISF forces a hard fight (for a map of the Mosul battle, see figure 3.3).

The CTS 1st, 2nd, and 3rd Iraqi Special Operations Forces (ISOF) brigades spearheaded the assault.[176] Supplementary forces included the Iraqi Ministry of Interior's Emergency Response Division (ERD),[177] PMF,[178] and Iraqi Kurdish Peshmerga fighters,[179] as well as soldiers from the 1st, 9th, and 15th Divisions of the Iraqi army,[180] which operated mostly on the city outskirts. Tribal militias and Federal Police (FedPol) followed from the rear to patrol liberated areas, though the latter took on a greater role in west Mosul together with the ERD.[181] According to the U.S. Army's Mosul Study Group, about ninety-four thousand Iraqi forces[182] participated in the Mosul battle overall. According to U.S. advisors, the main CTS forces (doing most of the hard urban fighting) probably did not number more than seven thousand troops in total advancing methodically neighborhood-to-neighborhood, and had sustained about 60 percent casualties by July 2017.[183]

The ISF first approached the city on northern, eastern, and southern axes, driving to the Tigris River, which bisects Mosul. FedPol and the Iraqi army's 9th Division advanced from the south and the 15th Division from the north.[184] However, these failed to penetrate into the city and only the eastern thrust, headed by the CTS, made any headway.[185] It was mostly up to the CTS to capture the eighty square kilometers of mid-density east Mosul, but heavy casualties and lack of support from the other axes prompted the ISF to withdraw to its frontlines, concentrate all its forces on the eastern axis, and resume the attack with this augmented force.[186] The CTS continued doing the bulk of the fighting, but by advancing piecemeal, it completed the mission by January 24, 2017.[187] The operation involved fighting in open rural terrain on the outskirts of Mosul, where IS set up defenses concentric to its urban fortifications, followed by hard urban fighting. IS deployed "defense-in-depth" tactics well in Mosul, with formidable defenses throughout the city—not only on the outskirts and entrances—and smaller groups of fighters trying to lure opposing forces beyond the frontlines and into ambushes. SVBIED strikes caused heavy casualties for the advancing CTS forces, prompting them to adopt a more methodical advance to improve force protection and give additional time for repair, refit, and replacement.

After reaching the Tigris, the ISF took about six weeks to regroup. It then advanced from the south on the remaining approximately thirty square kilometers of the denser western part of the city, including crowded Old Mosul, and completed the city's encirclement, finally liberating it on July 20. In the west Mosul battle, the FedPol and ERD took more prominent roles to relieve the reduced CTS. However, these forces advanced even slower in the hazardous narrow streets of Old Mosul and relied more on indirect fire, including mortars, artillery, and rockets, as well as airstrikes to reduce targets before moving.[188] Use of coalition airstrikes in such a dense environment prompted concerns about civilian casualties, especially after an airstrike in March 2017 that killed 105 civilians.[189] The west Mosul fight slowed for several reasons—aborted missions because of civilian presence, more restrictive rules of engagement, and reluctance by advancing ground forces against zealous IS fighters—and eventually the CTS returned as the primary frontline force.

Estimates of IS numbers varied widely.[190] Advisor to the Iraqi government Hisham al-Hashimi estimated there were 6,000 fighters[191] while prominent Iraqi historian and Mosul blogger Omar Mohammed estimated 8,000 to 9,000.[192] However, IS casualty rates ranged as high as 25,000 according to Iraqi Lt. Gen. Abdul Amir Yarallah,[193] confirming U.S. SOF officers' claims that strength estimates were unreliable.[194] Analysts Michael Knights and Alexander Mello estimated 450 to 850 IS fighters engaged in the battle at any point in time in the first half of the battle, in east Mosul.[195]

Given the size of Mosul, IS could not have defended all points of the city, but it could still focus all its efforts on one sector when needed, because the advances were on single axes, which helped it avoid being outnumbered in engagements.[196] The encirclement of the city during the battle for west Mosul appeared to challenge IS with a concentric attack, but the bulk of the offensive again came from the single south-north axis, from which the FedPol, ERD, and CTS advanced, and IS could still focus most of its energy on meeting those forces. Hence, IS met attackers with manageable force ratios at their points of contact despite overall numerical inferiority.

Although IS ultimately lost Mosul, it continued portraying itself as winning and imposed a high cost on the ISF. In the Islamic State's August 2017

issue of *Rumiyah* magazine, the group published an essay titled "A Mujahid's Memories from the Battle of Mosul" in which an IS member recounted fighters seeking martyrdom in the city, with one foreign fighter proclaiming when asked whether he would return to his home country, "Never. I don't want anything except Jannah [the paradise of the afterlife that could be attained through martyrdom]."[197] In this period, IS emphasized its veneration of martyrdom, drawing on the concept of the "two best outcomes"—"either victory and triumph or *shahadah* [martyrdom] and Paradise"[198]—to show it was in a "win-win" situation.[199]

The group proclaimed that Mosul and other areas of IS resistance would become a "graveyard" for IS enemies.[200] Indeed, the CTS was decimated, and much of the city, especially Old Mosul, was reduced to rubble, with 65 percent of it destroyed, up to eleven thousand civilians killed, and one million people displaced.[201] The Islamic State's zealous defense, in turn, brutalized the ISF, not only forcing it to destroy so much of the city but also prompting some instances of even U.S.-trained CTS soldiers, exhausted and demoralized from the fighting, allegedly executing and torturing their prisoners.[202] Therefore, although IS lost Mosul, it presented martyrdom as a welcome alternative to victory and compelled the ISF to pay a high price for taking back the city.

On the Defensive Strategically, Fighting for the Initiative Tactically

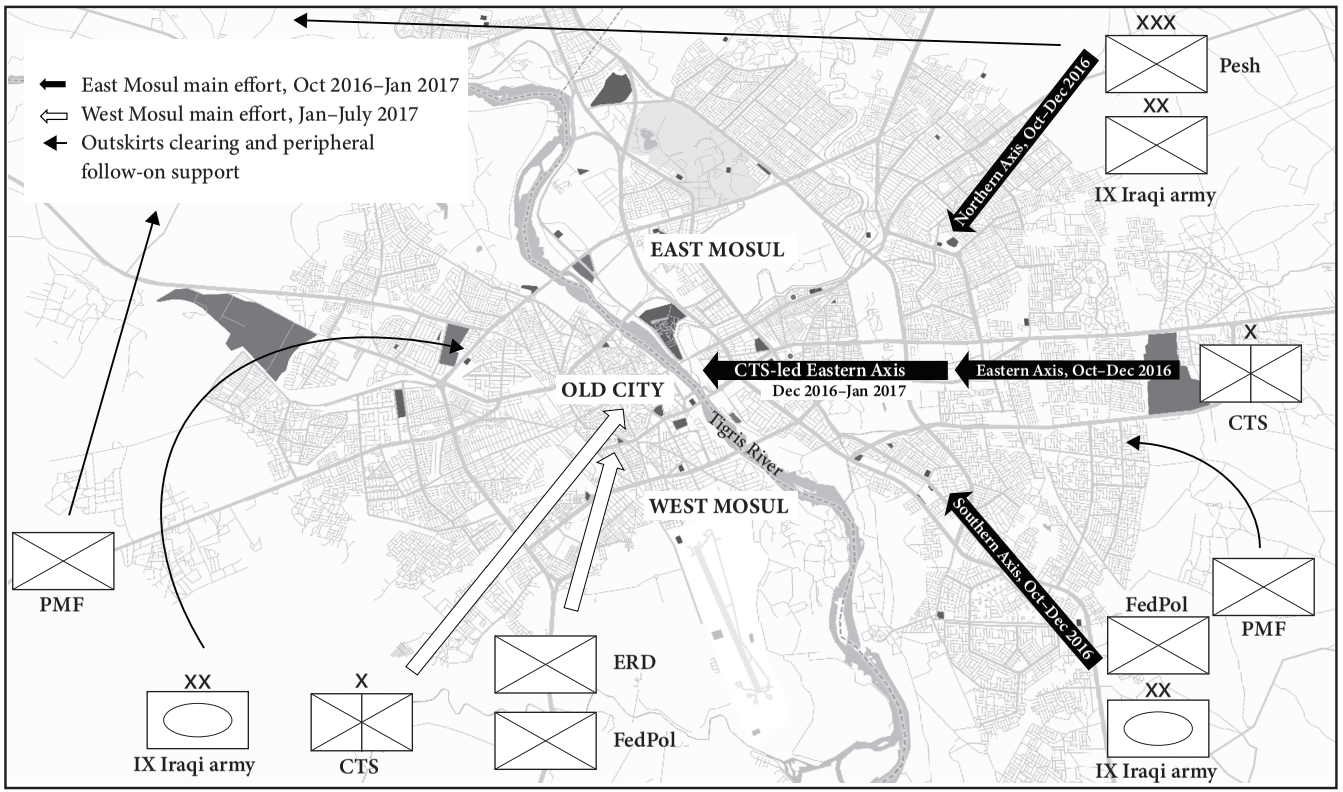
Although IS could no longer carry out large offensives to improve its strategic positions, it could still grasp the initiative locally at different times during the battle of Mosul. Its principal method of taking the initiative was the small-unit counterattack, characterized by extensive use of "Mad Max"–style SVBIEDs, heavily up-armored with welded metal plates. IS used civilian cars and bulldozers, as well as captured armored personnel carriers as chassis for SVBIEDs. Up-armored with slat and cage armor, these vehicles were virtually impervious to small arms and capable of absorbing RPG and ATGM fire.[203] Some SVBIEDs were camouflaged and upgraded with mounted machine

guns and rocket launchers to suppress targets as they approached.[204] In east Mosul, IS threw waves of SVBIEDs to delay, weaken, and reverse the advance, and bog down the ISF in urban areas. By December 2016, the Iraqi military reported that IS launched an astonishing 632 SVBIEDs, an average of 14 per day.[205] Fear of SVBIEDs pervaded ISF units to the point that they considered any vehicle they encountered as a threat, in one instance pointing their guns at an approaching civilian car carrying a journalist.[206]

U.S. SOF officer Col. Bill Rose recalled that in Mosul, IS would typically use one or two armored SVBIEDs to shock and reduce a target of massed infantry groups, followed by a platoon-sized infantry assault to exploit the ensuing confusion.[207] Drones were also an important component of IS operations in Mosul, providing aerial imagery for intelligence gathering and serving as platforms for releasing explosives.[208] A U.S. SOF officer recalled a complex counterattack in which IS rerouted a launched SVBIED toward the rear of a CTS position, which was locked in a firefight from a building, as IS saw from drone imagery. After the car bomb detonated, an IS drone dropped a grenade on the CTS personnel gathered at a collection point for the casualties from the SVBIED. IS infantry fighters then engaged the remaining CTS troops.[209] This coordinated use of intelligence, SVBIEDs, air-delivered explosives, and infantry in a single engagement revealed a significant combined arms capability in IS counterattacks and, indeed, enabled IS to retake the initiative at certain times.

In the battle for east Mosul, these tactics jeopardized the viability of the ISF's offensive. For its part, the CTS demonstrated a high level of tactical proficiency and had a culture of aggressively advancing in tight formation against its enemies,[210] often outpacing the regular Iraqi army.[211] However, the CTS style of warfare played into IS hands, as the jihadist group staged defense-in-depth ambushes with SVBIEDs and interlocking small-arms fire overlooking kill zones against the unsupported and tightly grouped advancing forces. As a result, the CTS sustained 50–70 percent casualties in the east Mosul battle, including all of its battalion commanders, who preferred fighting from the frontlines.[212] On December 6, 2016, these losses were punctuated when a push toward the al-Salam Hospital by about one hundred soldiers of the Iraqi 9th Division fell into an IS ambush involving

Figure 3.3 Battle of Mosul



fifteen SVBIEDs that wounded or killed nearly all the attackers, forcing them to abandon their vehicles and retreat under heavy fire.[213] CTS combat power was significantly reduced, prompting a senior Pentagon official to state, "the [CTS] could become combat ineffective in a little over a month, and perhaps even sooner."[214] Multiple U.S. SOF officers involved in the battle of Mosul concurred, recalling that the high rate of CTS casualties, especially among its commanders, raised serious concerns about its ability to adequately replace losses.[215]

Coalition and CTS efforts progressively reduced VBIED effectiveness. The CTS slowed its aggressive pace and implemented a methodical "backward-sweep" pattern of dividing Mosul into grids and securing neighborhoods' perimeters with earthen berms and barricades erected by bulldozers before doubling back and clearing buildings inside the neighborhoods.[216] At the same time, the coalition concentrated more air assets to help the CTS advance, targeted more SVBIED production facilities, and devolved munitions release authority from general officer[217] to junior officer level[218] to react quicker to SVBIED launches.[219] Coalition bombers cratered roads to block IS vehicles.[220] These efforts reduced the effectiveness of SVBIEDs, though IS sometimes managed to penetrate barriers with its own up-armored bulldozers to make way for car bombs. Anticipating ISF advances, the jihadist group also concealed SVBIEDs in garages and launched them during clearing operations.[221]

In west Mosul, IS made further adaptations but still could not regain the initiative. The narrower, more convoluted streets of Mosul's old city were less suitable for SVBIEDs, and IS relied even more on drone imagery and route-guidance to conduct precision strikes on advancing forces.[222] IS also improved camouflage for its SVBIEDs, painting fake windshields, grilles, and wheels over armor plates to make car bombs look like civilian vehicles from a distance.[223] Additionally, IS "deep strikes" on liberated areas of Mosul, including cross-river night raids, sniper attacks, rocket and mortar fire, and drone strikes on civilian and military targets, disrupted and demoralized the ISF.[224] The Islamic State also used human shields and moved in squad-sized groups to hinder coalition targeting.[225] These tactics supported a fierce IS defense in the streets of Old Mosul, with suicide bombers jumping off

buildings to ambush Iraqi units.[226] However, these efforts could not achieve more than delays in the ISF's advance.

Coalition targeting of IS tactical leadership became an important factor in the west Mosul battle. Brig. Gen. Matthew C. Isler stated that deliberate targeting of IS tactical and operational leadership began after the operation to oust IS from Fallujah, which ended just four months before the start of the ISF assault on east Mosul. "Killing a large portion of the leaders paralyzed their command chain for the opening assault, and allowed Iraqis to establish an effective foothold in the city with less IS resistance than was expected," Isler said. "The effectiveness of these opening pre-assault deliberate strikes was cited during IS POW interrogations where they said they didn't know where their leaders went, and they lacked tactical direction needed to execute an effective defense."[227] Hence, eliminating many tactical leaders helped the ISF advance into west Mosul.

A Well-Organized Defense

Now on the defensive, IS could not engage tribes and do the attritional shaping of the security forces that characterized its initial conquests. Instead, the defense of Mosul best showcased IS organizational capacity. The defense followed a multilayered concentric plan with well-organized positions forming lines on the rural outskirts, outer suburban neighborhoods, and city center. With limited manpower and virtually no air defense capabilities, the group abandoned certain villages on the outskirts that were more vulnerable to air attack.[228] IS units were organized in standard small units composed of several four- to five-man squads with one heavy machine gun and one RPG. They were organized into twenty- to thirty-man platoons and assigned by neighborhood.[229] At its lowest level of organization in some areas, IS deployed teams of three to five fighters, with enough manpower for each team to be about one block apart from another. These could mass several teams for counterattacks as needed.[230] ATGM ammunition caches were situated in the city's outer defenses to strip the ISF of tanks and other armor before reaching the city center.[231] IS even tried building chemical weapons from

mustard agent at Mosul University to bolster its defense.[232]

IS efforts to sustain its IED emplacements and SVBIED strikes further demonstrated its organizational foresight. IS built numerous facilities for producing and housing its IEDs and VBIEDs. Airstrikes destroyed at least twenty IED/VBIED factories or facilities around Mosul in the November–December 2016 period alone, according to U.S. Central Command.[233] One U.S. SOF officer recalled the ISF encountering "hundreds" of these IED/VBIED workshops throughout the east Mosul battle, some housed in tunnels large enough to hold vehicles and serve as VBIED launchpads, as well as in aboveground compounds.[234] Conflict Armament Research investigators found a high level of industrial capacity and standardization in IS production, leading them to conclude, "the degree of organisation, quality control, and inventory management, indicates a complex, centrally controlled industrial production system."[235] For example, these factories produced wooden boxes to store and transport materiel across specialized facilities that were responsible for different stages of production, and the investigators assessed explosives production ran into the tens of thousands in the months preceding the Mosul battle.[236] Likewise, researcher Hugo Kaaman noted that logos on standardized SVBIED models seen across IS *wilayat* (provinces) indicated where they were made.[237] So, in fact, IS IEDs were far from improvised.

Despite the coalition having destroyed the bridges connecting east and west Mosul, a U.S. SOF officer noted IS had no shortage of manpower and materiel west of the Tigris, indicating it was prepared for battle on either side.[238] The group, therefore, knew its combat needs and ensured that it could sustain the fight independently in both parts of Mosul.

IS tunnels and "mouseholes," or blown-out walls in adjacent buildings, further showed IS organizational prowess. Mosul was filled with elaborate tunnel networks that allowed fighter movement between neighborhoods. Tunnels contained equipment for a variety of activities, including rest and refit, training, and IED manufacturing.[239] Moreover, IS tunnel construction was sophisticated, as shown when the ISF captured an advanced IS tunnel burrowing machine in early November 2016.[240] Aboveground, IS used mouseholes to ensure building-to-building movement by fighters with minimal interference from coalition airpower.

The IS defense of Mosul exhibited an intricate, coherent strategy. As Knights and Mello noted, the jihadist group set up an "economy of force" defense on the city's outskirts and outer suburbs, with IED emplacements, SVBIEDs, preregistered mortar strikes, and antitank ambush teams armed with ATGMs and RPGs supporting fortified infantry positions. In addition, IS deployed smokescreens with sulfur piles, burning tires, and ignited oil wells to try to disrupt coalition air targeting, as well as used tunnels and mouseholes to allow the concealed movement of fighters and storage of materiel.[241]

High Fighting Power, Mixed Motivations

Throughout the battle, IS fighters demonstrated a high will to fight. They fought hard in their positions, advanced under fire, and when they fell back from their defenses, did so in an orderly fashion without abandoning their weapons, or in service of a defense-in-depth ambush. Rarely did IS fighters rout and leave behind their weapons, let alone surrender.[242] Even at the end of the battle, when IS fighters approached ISF troops to supposedly surrender, they often instead detonated suicide bombs.[243] Indeed, withdrawals were generally most orderly in larger retreats, such as those along the road to Mosul preceding the battle, with a well-organized river crossing at al-Sharqat and mass rapid evacuation from al-Qayyara with vehicle and fighter formations "herding" civilians in close order to deter airstrikes.[244]

Ideological commitment greatly helped to maintain IS fighting power. As the battle intensified in early November 2016, IS leader Abu Bakr al-Baghdadi released a speech titled "This Is What Allah and His Messenger Promised Us," in which he ordered fighters defending Mosul to fight to the last man.[245] The group continued publishing encouraging content through 2017. On May 4, toward the end of the battle, IS released a *nashid* (work of vocal music) called "Heed the Call" reaffirming its members' commitment to fight to the death, proclaiming, "Only death has remained in the time of the epic battles and conflict."[246] It also appealed to fighters' sense of honor, asking, "Where are the men of manliness?"[247] Four days later, IS posted a

video titled "The Guile of War" showing IS members fighting tenaciously with small arms, rocket launchers, antiaircraft machine guns mounted on pickup truck, tanks, VBIEDs, and other weapons behind fortifications and threatening their "apostate" adversaries and praying between scenes of war.[248] The next month, IS released another *nashid* called "My State Is Remaining," asserting, "The [state] of the believers is the fortress of the Muslims."[249] Therefore, ideology continued as a prominent motivator for IS fighters.

Intraorganizational tensions rooted in ideological disagreements remained but did not seem to greatly affect cohesion on the Mosul battlefield. These tensions were related to how expansively to apply *takfir,* a jihadist concept allowing for killing of people jihadists labeled as apostates. Mironova tracked the "chain *takfir*" dispute within IS, with some, mostly foreign, fighters claiming that all those failing to call out people labeled as apostates should themselves be labeled as apostates, along with anyone else refusing to declare apostasy on the former.[250] Some "ultraradical" fighters ventured as far as to declare Baghdadi an apostate, and since mostly foreign fighters held these views, this declaration exacerbated the cultural tensions between foreign and local fighters. As IS leaders cracked down on these fighters in Syria, they attempted to either leave the group or volunteer for service in Mosul, where they felt safer from the group's internal security service, the Amni, and hoped to find more like-minded IS members.[251] Some of these fighters became famous jihadists "martyred" during the defense of Mosul. For example, Omar Grozny, a Chechen fighter, died fighting in the city after declaring apostasy on Baghdadi.[252]

As later at Baghuz, the circumstances of the Mosul battle helped motivate IS fighters. Even before the city was encircled, coalition aircraft patrolled the outskirts, waiting to pick off fleeing fighters. Additionally, IS prohibited people from leaving Mosul, at one point unleashing sniper fire on civilians attempting to flee.[253] IS fighters, especially foreign fighters, largely did not see surrender as an option out of fear Iraqi forces would torture and kill them anyway.[254] Thus, encircled and with no real option of surrendering, even less committed IS fighters often appear to have fought to the death in Mosul.

IS Performance

At Mosul, IS showed it could mount a serious conventional defense. Although it ultimately was not enough to stop the coalition-backed ISF, IS impressively dragged the battle into a hard nine months, brutalizing its adversaries and forcing the destruction of most of the city. Indeed, in comparison, the 1944 Battle of Aachen, which had similar battle space and force ratios and featured a staunch defense by outnumbered German forces, lasted less than three weeks.[255] Several factors characterized the Islamic State's defensive performance:

- The jihadist group's aggression and tactical restlessness persisted on the defensive, with the SVBIED-led counterattack remaining its most potent tool for taking the initiative.
- Careful defensive preparations helped optimize its limited manpower, enabling it to fight effectively with small units while evading devastating coalition airstrikes and revealing the group's organizational foresight.
- IS defenders maintained a high will to fight throughout the battle, leading to hard fighting for the ISF at every step of its advance.

The Mosul battle marked the end of IS territorial power in Iraq, with its other Iraqi strongholds falling relatively easily.[256] However, IS held off the numerically superior ISF in Mosul. This reveals the actual fragility of the ISF offensive and how important coalition support was. According to Airwars, a London-based NGO that tracks airstrikes in Iraq and Syria, the coalition conducted more than twelve hundred airstrikes in Mosul during the battle.[257] These airstrikes were crucial to eliminating SVBIEDs and preventing the group's fighters from exploiting the vulnerable flanks of the CTS when it outpaced the other elements of the ISF. Just as in Kobane, it is doubtful whether the coalition's partner forces could have won without this airstrike support. This same theme would emerge repeatedly, all the way up to the Islamic State's final territorial defense at Baghuz.

The Defense of Baghuz, February–March 2019

In Baghuz, the Islamic State's final territorial stronghold, the SDF and coalition faced fierce resistance to the last man to liberate the village.

The Battle for the Hajin Pocket

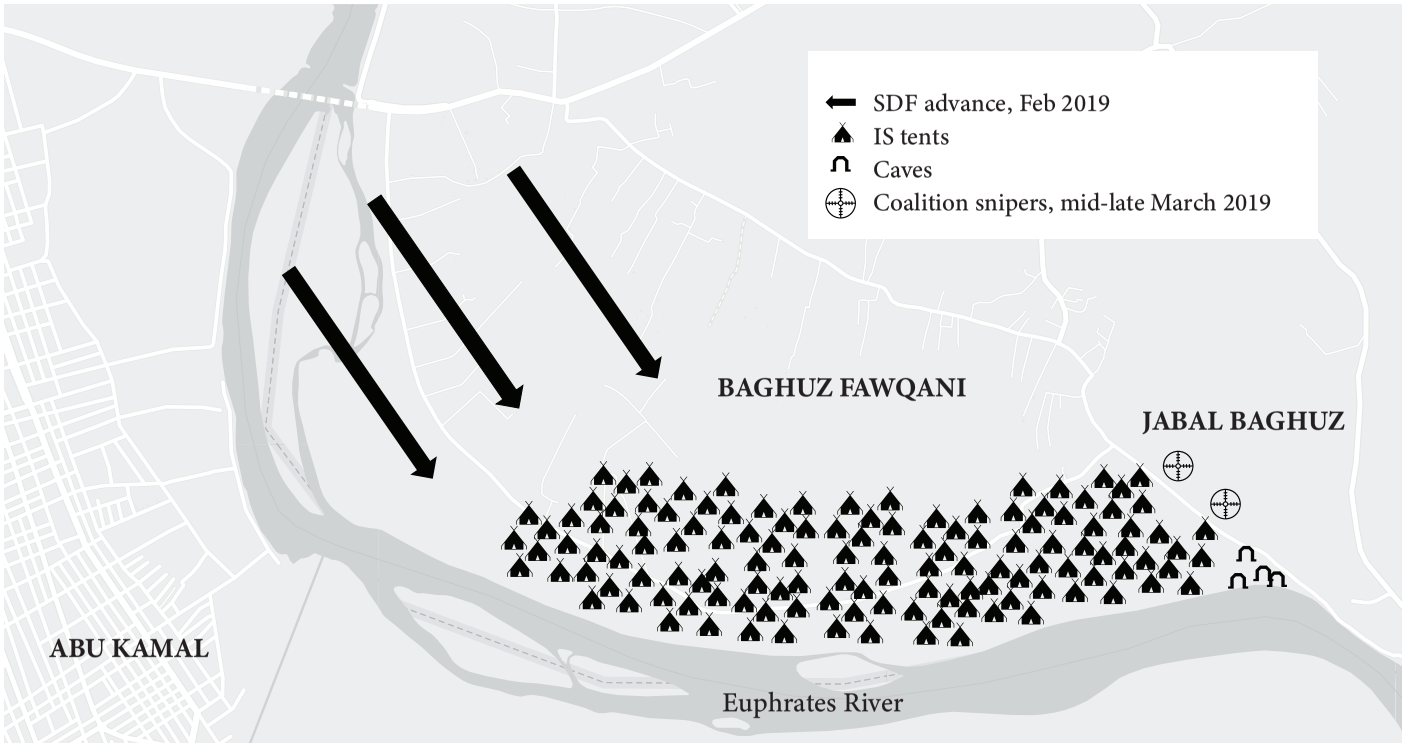
By late 2017, IS became concentrated in the "Hajin pocket," an area in northeastern Syria at the Iraqi border that is about the size of Manhattan.[258] With coalition support, a combined force of Kurdish and Arab fighters known as the Syrian Democratic Forces (SDF) had spearheaded the anti-IS campaign across the Islamic State's Syrian strongholds, in Manbij, Raqqa, Hasaka, and Deir al-Zour.[259] The stage was set for a final offensive on Hajin by December. However, in January 2018, Turkey conducted an offensive on Afrin, a Kurdish-majority district in northwest Syria. Because the Kurdish YPG, or People's Defense Units, had been the base of the SDF's formation and dominated the SDF's command structure and personnel, the SDF diverted the bulk of its best fighters to battle the Turkish incursion. That fighting delayed a push into the Hajin pocket to December 2018.

This long operational pause gave the Islamic State time to strengthen its position. The group set up trenches, tunnels, IEDs, and other defensive fortifications, as it did in Mosul. By October, the SDF finally mounted an attack on the pocket, opting to strike at the southern tip into the village of Baghuz.[260] SDF attackers became stretched thin against heavy IS resistance, and lacked coalition air support, an essential component of SDF operations. Because of low-visibility weather, flight teams were prevented from ascertaining hostile targets, a mandate under coalition rules of engagement. The bad weather also complicated the coalition's logistical support efforts, forcing the SDF to rely on its own more limited resupply capabilities.[261] Ultimately, the SDF could not sustain its offensive and retreated, a rare instance of a successful IS defense.[262]

As the SDF regrouped, Turkey struck again at Kurdish territories in northern Syria, prompting another redirection of Kurdish fighters. In fact, the impression among U.S. SOF officers present with the SDF was that most of the Kurdish fighters traveled north, leaving behind the SDF's large, but less capable, Arab contingent.[263] According to SOF officers, the Arab fighters were less aggressive and waited in defensive positions, refraining from making attempts to advance. They were brittle against IS counterattacks, mounting minimal defenses and retreating into SDF territory, and on at least two occasions were even routed in disarray when IS counterattacked from Baghuz.[264] On those occasions, U.S. advisors, who were stationed one kilometer behind SDF forward positions, had to pull back so as not to be overrun by IS.[265] The onslaught continued on November 24, 2018, when IS launched a large counterattack with a main effort north of Hajin city supported by multiple breakouts along the al-Jazirah Desert frontline. IS engaged the SDF at multiple points, captured SDF personnel and equipment,[266] and took control of al-Bahrah village, about ten kilometers from the group's original frontlines, and threatened the strategic SDF position at al-Tanak oil field.[267] Throughout October and November 2018 the SDF had setbacks, with IS counterattacks pushing back the frontlines by up to ten kilometers across the SDF's forward positions, delaying further operations by another three weeks, and threatening SDF positions around the strategically important northeastern Syrian oil fields.[268]

Fortune swung back in the SDF's favor in December, when Kurdish fighters returned to the Hajin frontlines and the bad weather subsided to allow renewed coalition support, and SDF fighters finally took Hajin city on December 14.[269] As the SDF advanced and IS territory shrank further, retreating IS fighters and their families crowded into the western part of Baghuz (known as Baghuz Fawqani), setting the stage for a renewed SDF push into the village. The Islamic State's final defense of Baghuz lasted from February 9, 2019, to March 23, 2019, ending with the group's territorial defeat and evacuation and capture of upward of 37,000 civilians[270] and 5,000 fighters, respectively.[271] (See figure 3.4 for a map of the Baghuz battle.) The SDF had 8,000 to 10,000 fighters, as well as coalition advisors and aircraft, against 6,000 to 10,000 IS fighters crowded in a miniscule 2.4 square kilometers

Figure 3.4 Battle of Baghuz



of suburban and farmland terrain.[272] The Euphrates River and cliffs of Jabal Baghuz enclosed the village to the south and east, respectively, with the SDF attacking from the north.[273] The SDF would take approximately 280 casualties in the battle[274] out of the 3,000 it lost in the Hajin campaign overall, according to U.S. SOF officers.[275] This section presents an analysis of IS defensive performance in the battle of Baghuz.

Shaping the Battlefield

As in Mosul and other IS defensive operations, the jihadist group's ability to weaken its adversary before engagement was limited. The group had time to prepare its defenses, but the yearlong interlude between the liberations of Raqqa and Hajin city, punctuated by constant SDF pressure, left little space for the group to conduct the tribal engagement, governance, and adversary infiltration characteristic of its most successful offensives. Instead, IS concentrated on shaping the human terrain of Baghuz by leveraging the large number of civilians present there and concealing its fighters and materiel. It also echoed previous defenses by fortifying the village with IEDs, snipers, machine guns,[276] and a limited supply of VBIEDs and ATGMs.[277]

Civilians, Conscripts, and Volunteers

According to a 2004 census, Baghuz contained about ten thousand residents.[278] On February 9, 2019, the village was saturated with about forty thousand people, mostly drawn from the caliphate's former territories and living in a massive "tent city" surrounding the village.[279] IS drew on this large civilian population for human shields and conscripts/volunteers.[280] Human shields deterred U.S. airstrikes and SDF advances for fear of causing civilian casualties. As SDF spokesperson Mustafa Bali remarked on the operation's third day, "If we manage to isolate civilians, it will take a few days. But if terrorists continue to use civilians as shields, it might take more than just a few days."[281] Indeed, early in the battle, IS held village residents in tunnels to hide the true number of civilians. When IS began bringing them out toward the end of February 2019, the SDF realized there were more civilians than

it had originally anticipated, delaying further operations.[282]

Conscripts and volunteers drawn from local populations helped occupy the group's final holdings. In both Iraq and Syria, local conscript/volunteer garrisons seem to have been prevalent in rural areas. These garrisons generally demonstrated poor combat skills, with one SOF officer noting that in some cases, they simply surrendered without a fight.[283] However, the officer noted that when directed by foreign fighters, who were generally more committed and experienced, conscripts were able to hold their ground, more significantly delay their adversaries, and perform a degree of tactical maneuver.[284] There also seemed to be a higher proportion of conscripts/volunteers, particularly female and child fighters, at Baghuz because many of the people there fled from other formerly IS-held areas, some for the purpose of staying inside the caliphate and carrying on the IS struggle, others under duress from IS members.[285]

In early February 2019, the SDF secured a corridor to facilitate escape for civilians trying to flee.[286] Although this corridor allowed about twenty thousand people to leave the village before the battle,[287] the SDF had to slow its advance after its first week of offensive operations once it discovered Baghuz contained many more civilians than previously estimated.[288] In addition, whenever SDF fighters intensified their operations, IS would send members and civilians to surrender, forcing the SDF to redirect manpower to screen, process, and evacuate the latter.[289] IS further complicated this process by sending suicide bombers among crowds of surrendering people, such as women with IEDs concealed as fake babies, targeting SDF members.[290] Some fleeing civilians expressed continued support for IS, possibly demoralizing SDF personnel evacuating them,[291] though others took fire from IS positions, indicating a portion of surrenders did occur without IS approval.[292]

Concealment

Further shaping the battlefield, IS leveraged tunnels, trenches, caves, and tents to conceal its assets. The group set up tunnel networks to avoid airstrikes and coalition surveillance and hid civilians in tunnels. As it cleared more areas of Baghuz, the SDF had to constantly watch tunnel openings

in case IS fighters were hiding in them.[293] Later, IS fighters and civilians occupied the caves in the cliffs at the village's eastern edge.[294]

IS used the numerous tents and trenches it built up around Baghuz to conceal personnel, materiel, and even facilities. This was a thrifty way to complicate coalition aircraft and artillery targeting because rules of engagement mandated that the armies had to find out whether civilians or combatants were occupying structures, including tents, before striking.[295] One tent covered an IS medical clinic provisioned with medicine, vials, and other equipment.[296] Another housed a sizable IED/SVBIED workshop, found intact in a large open field after the battle.[297] In addition, IS used tents to conceal its fighters' numbers, possibly distorting initial coalition estimates of IS strength. Communicating by radio through the tents, IS fighters frequently rotated radio codes to conceal their identities when coalition forces were surveilling the group's radio waves.[298] Finally, IS fighters staged ambushes from tents as SDF fighters approached.[299]

Grasping at a Lost Initiative

Despite its preparatory efforts at Baghuz, IS could ultimately only delay the SDF, not repel it, let alone reclaim the initiative. However, this decline was not for lack of trying; IS continued executing counterattacks, but they became less effective as the group lost materiel.

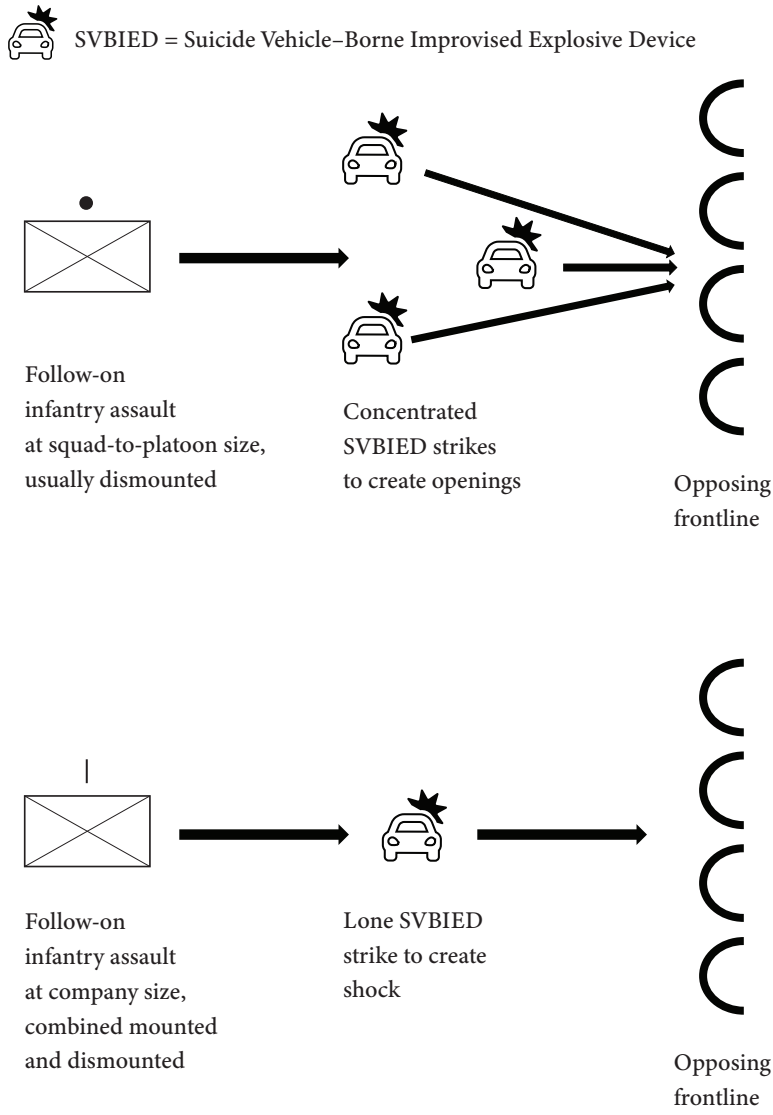
Counterattacks

During the Hajin campaign, IS counterattacking capacity decreased, reaching a low point at the battle of Baghuz. As discussed, IS counterattacks in late 2018 pushed back SDF lines. These reversals brought IS fighters to within one kilometer of the oil fields in the Middle Euphrates River Valley, politically important objectives to the SDF, which sought to use them as leverage in later dealings with the Assad regime and other actors in Syria. A U.S. advisor recalled that as the SDF became concentrated on the oil fields, IS fighters staged a breakout of an estimated two hundred fighters, probably to help carry on the insurgency IS was developing in the recently liberated areas of Syria.[300]

By this point, IS counterattacking doctrine had evolved to feature larger strikes dependent on poor weather conditions. As one U.S. SOF officer explained, "When the weather turned good, they would hide in buildings, use tunnels, not expose themselves, cache their weapons…As soon as the weather turned bad, they would roll out armored vehicles out of hidden warehouses, underground facilities, things like that and use those to flank the SDF from the desert."[301] In contrast to the squad- or platoon-sized SVBIED-led counterattacks IS usually fielded, Hajin commonly saw company-sized contingents advancing almost like "armored columns" in bad weather, though still sometimes led by a single SVBIED.[302] The particularly large November 2018 counterattacks involved multiple advances amounting to possibly larger than battalion size. A U.S. officer estimated SDF casualties during the counterattacks at approximately 700–800, beginning to prompt concerns over whether the SDF would be capable of liberating the Hajin pocket.[303] Although the SDF reversed the group's gains in December 2018, IS showed it could still produce painful counterpunches (see figure 3.5 for a diagram).

This capability deteriorated as the SDF advanced. Conscripts/volunteers became important for sustaining IS capacity for counterattacking as the group lost experienced fighters and vehicles, though volunteers also contributed to decreasing effectiveness.[304] Counterattacks also began involving less SVBIED use.[305] A U.S. officer involved in the SDF operation described IS counterattacks during the battle of Baghuz as far less organized than in previous instances.[306] For example, one documented counterattack on March 10, 2019, which attempted to infiltrate SDF lines, was easily spotted and repelled.[307] Another on March 13 featured suicide bombers attempting to get close to the SDF under cover of smoke and dust, without causing any casualties.[308] Despite compromising combat effectiveness, the Islamic State's frequent use of women and children as fighters shocked SDF members, with one U.S. officer remarking, "the level of brutality required of the SDF" to fight women and children caused such "mental trauma" that there were several instances of SDF members committing suicide.[309] This demoralizing impact was probably the most effective aspect of IS counterattacks at Baghuz.

Figure 3.5 IS Strike/Counterattack Tactics



Demodernization of IS Conventional Operations

In early March, as the SDF got closer to IS positions, the jihadist group began deploying SVBIEDs and a considerable number of fighters wearing suicide vests, but even these did not have the same effect as in previous engagements.[310] SVBIEDs were the key features of IS counterattacks, spearheading the group's gains in the earlier phases of the Hajin campaign. One SOF officer involved in the late 2018 fighting recalled SVBIEDs, as well as drone-borne IEDs, halted or reversed SDF advances on multiple occasions and remained the top cause of SDF casualties. The officer further noted that, of all IS assets, up-armored bulldozers were most feared by the SDF, since they destroyed defensive berms in preparation for SVBIED strikes.[311] Some SDF personnel referred to IS bulldozers as "T. rexes" because of the heavy up-armoring that made them nearly impervious to any weapon except a direct hit from an air-launched Hellfire missile.[312]

The loss of IS mobile assets helps explain why the group produced fewer effective counterattacks at Baghuz. During the Hajin campaign, IS had undergone a process of "demodernization," the historian Omer Bartov's term for the enormous loss of material assets the Wehrmacht endured during its invasion of the Soviet Union in World War II.[313] Progressively lengthy and hazardous supply lines coupled with breakdown and destruction of armored assets and an increasingly advanced, well-equipped adversary meant the Germans had to fight in a "primitive" fashion, with large infantry formations moving on foot, often in dire conditions. So it was with IS. According to IS media reports, in the period between December 2015 and November 2016, the group sustained a monthly rate of 40 to 120 SVBIED operations.[314] In contrast, U.S. officers recalled no more than several dozen SVBIED operations over the entire six months of the Hajin campaign.[315] Years of fighting reduced the Islamic State's materiel strength, constraining its ability to launch the SVBIED strikes it usually relied on to soften up its foes.

In fact, coalition airstrikes emphasized hitting any vehicles they could target under the rules of engagement.[316] According to coalition reports, between October 2018 and March 2019, these strikes destroyed 133 VBIEDs.[317] Hugo Kaaman recorded only 20 SVBIEDs used by IS or captured

by the SDF throughout the Hajin pocket in the same period.[318] There were likely undocumented instances of SVBIEDs, but these reports suggest that airstrikes eliminated up to 85 percent of the Islamic State's car bombs, a considerable amount that certainly hamstrung IS counterattacking capacity. This fact was also reflected in how many casualties IS could inflict on the SDF; over the entire six months of the Hajin campaign, the 2019 battle of Baghuz accounted for only up to 10 percent of the SDF's approximately three thousand casualties whereas the more proficient IS counterattacks of October–November claimed up to 27 percent.

Of vehicles and VBIEDs destroyed during the battle, the vast majority (approximately 83 percent of vehicles and 76 percent of VBIEDs) were destroyed between February 24 and March 23. This information shows that IS did attempt to surge its forces as the SDF neared but that coalition air support was able to repulse most mobile elements before they could be used to seriously harm the SDF. Hence, advancing SDF fighters generally enjoyed close air support throughout the battle, enabling them to maintain their operational tempo while efficiently protecting their personnel. This fact was reflected in the SDF's capture of at least sixteen VBIEDs before they could be launched, meaning the SDF's pace of operations often precluded the Islamic State's capability to use its greatest asset.[319] Overall, coalition airstrikes and close air support for the SDF seriously constrained the IS ability to use VBIEDs and regain the initiative, even locally.

Remnants of a Robust Organization

Despite its demodernization, IS fielded numerous IEDs, which is a testament to its robust organizational structure. The presence of an IED factory and use of SVBIEDs, suicide belts, and emplaced IEDs at such a late stage, when the group had difficulties feeding its fighters, demonstrates its intact organizational structure.[320] One U.S. officer remarked that as the SDF accelerated its advance, it found numerous large weapons caches in "pristine" condition—each well maintained with tens of thousands of rounds of ammunition and hundreds of explosive devices—throughout the Hajin pocket.[321] Some

buildings in the pocket stored so many IEDs that coalition surveillance could spot caches by the glowing heat signatures they created.[322] It was because of this that a U.S. SOF officer involved in the Hajin campaign recalled, "It seemed like [IS was] always able to have ammunition, weapons, and men."[323] The massive amount of materiel IS stored and retrieved for use in its final conventional operations reveals considerable organizational foresight.

Still, the damage IS sustained was evident in the lower quality of its IEDs.[324] One SOF officer noted the large quantity of emplaced IEDs in open areas and buildings throughout the Hajin pocket compared to the SDF's earlier operations in Manbij, Hasaka, and Raqqa. However, these IEDs were not as technically advanced, most lacking the infrared sensors,[325] photoelectric cells triggers,[326] and anti-tamper switches of IEDs encountered elsewhere, leading U.S. officers to assess that IS had lost a considerable portion of its expert bomb makers.[327] IEDs were also less concealed, with many easily recognizable emplaced in open areas, whereas IS had previously made efforts to hide IEDs under rubble, carpets, earth, or other inconspicuous objects.[328] Having already dealt with more sophisticated IEDs, discovering, approaching, and dismantling these devices proved simpler for the SDF, which suffered fewer casualties from IEDs, as well as fewer lethal injuries for those who were wounded by IEDs.[329] Overall, these factors suggest that IS had less time and knowhow to enhance and conceal its IEDs in the Hajin pocket, though their high quantity still testifies to the group's intact organization.

Further, IS appears to have maintained at least a local command and control and logistical infrastructure in Baghuz. Over the course of the battle, coalition reports stated airstrikes destroyed 15 "command and control nodes," an impressive amount considering the small territory IS occupied at this time.[330] These nodes were its equivalent of a tactical operations center (TOC). The nodes were ad hoc, usually concealed compounds from which IS members used maps, imagery from drones, and other systems to gain tactical and operational situational awareness and information for placement of fighters and supplies.[331] TOCs would communicate via runners, often on motorcycles for concealment and traversing less developed terrain, who would transport information (on thumb drives or other media), weapons

and ammunition, food and water, and even fighters according to the needs of IS forces in their localities.[332]

Another indication of the group's organizational continuity was its persistent media operations. On March 11 and 21, 2019, respectively, IS released the two parts of a video series titled "The Implications of Steady Endurance from al-Baghuz."[333] The professionally produced and edited videos featured interviews with IS fighters, aerial footage of Baghuz, and scenes from the battle, encouraging IS members to continue fighting and threatening coalition forces with retribution even if the village were to fall. On March 18, the group released an audio message by IS spokesperson Abu Hasan al-Muhajir claiming, "This is only the beginning of the road and the first step of the rebound and an approval for the coming conquest, by Allah's permission."[334] The March 21 issue of the group's weekly newsletter, *al-Naba*, revealed the design behind its defensive efforts, claiming IS fighters' "fierce" use of "explosive belts, snipers, and mines planted in every place" contributed to "prolonging the battle."[335] Thus, IS media releases showed the group was still able to propagate a consistent message at a late stage and suggested that its defensive measures were a deliberate effort to delay the SDF advance, signs the organization remained intact.

Maintaining a High Will to Fight

IS deployed clever low-tech tactics in Baghuz, but it was still fighting under what many conventional forces would have considered hopeless conditions, begging the question of why it kept going and did not surrender while it still had the chance. Indeed, the SDF paused its advances to give IS fighters and civilians the opportunity to surrender.

Mixed Levels of Combat Motivation

Ideological commitment was a major factor in keeping up the Islamic State's will to fight at Baghuz. Many of the fighters and civilians who arrived in

Baghuz during the SDF's campaign to liberate the Hajin pocket were committed to the jihadist ideology or wanted to live in the caliphate no matter the conditions, while others were likely forced to stay inside IS territory. Indeed, the vast majority of the people inhabiting the al-Hawl camp for internally displaced persons (IDPs) and refugees, which had been set up by the SDF for people fleeing IS territory, arrived during and after the battle, when there was no more IS territory left.[336]

As the battle progressed, IS sent many of its fighters and civilians to surrender[337] and executed others who tried to surrender without approval.[338] Thus, IS solidified a cadre of "hardline" fighters, most of them foreign fighters—especially Russian-speakers—and caliphate inhabitants who continued fighting, refused to surrender, and kept less committed people in line.[339]

This hardline cadre appeared in Baghuz and throughout the Hajin pocket. U.S. officers present with SDF forces described fierce fighting against IS positions held by hardliners who were mostly foreign fighters.[340] Where IS withdrew its forces, it did so in a relatively orderly fashion, retrieving equipment and conducting retreats, not routing in disarray.[341] To capture equipment from IS, the SDF would usually need to surprise IS fighters and advance rapidly, thereby denying IS the opportunity to withdraw, but SDF fighters still had to contend with committed IS defenders.[342] A pattern emerged whereby senior IS commanders—who were mostly Iraqis, not foreign fighters[343]—would leave behind hardliners to defend areas supplemented by local volunteers and conscripts.[344] Foreign fighters, in turn, boosted IS determination further since they could not blend in with Syrian and Iraqi communities and were not welcome in their home countries, leaving them with little incentive to surrender or flee.[345] In contrast, where IS garrisons surrendered with little resistance, fighters were likely conscripted locals with no foreigners among them.[346] Therefore, an ideologically committed cadre of IS fighters, with support from other committed inhabitants of the caliphate, appears to have been a major component of maintaining IS units' will to fight in the Hajin pocket, especially in Baghuz.

Coercion

The less motivated IS members still faced coercion to continue fighting although Islamic State territory in Baghuz was miniscule and encircled.[347] IS discouraged surrender by punishing people who attempted to do so without approval and threatening to kill the families of fighters who fled. In Baghuz, the hardliners kept such a strong grip on IS members that after the battle, the SDF found some of the village's inhabitants hiding in tunnels and suffering from scurvy, an indication they had hidden or been held there without exposure to sunlight for extended periods.[348] Hence, the impossibility of escape and high cost of surrender likely played roles in motivating IS members to remain and fight.

Explaining Surrenders

During the battle, IS had a two-pronged strategy vis-à-vis surrenders: overwhelming the SDF with processing the surrendered people and securing the next generation of IS fighters. IS seems to have sought to oversaturate al-Hawl, both to strain SDF resources and to prepare for future operations from the camp. An SOF officer explained that although it was unclear which fleeing inhabitants were still committed to the IS ideology, there seemed to be a plan by IS to send women and children to surrender, make their way to IDP/refugee camps by posing as disillusioned or unwilling IS members, and raise the next generation of jihadists there.[349] This plan would be consistent with IS leader Baghdadi's focus in mid-2018 to develop and disseminate an educational curriculum[350] and his speech in September 2019 calling on IS supporters to help jihadists break out of al-Hawl.[351] Further, according to Mironova's July 2020 study of women detained at al-Hawl, some IS supporters and fighters have been smuggled out of the camp, and many women, just under 30 percent, still supported IS at that point, with varying degrees of commitment to its ideology.[352]

SDF efforts generally failed to cause surrenders, but one informative exceptional instance did not follow that trend. In mid-March, SOF officers deployed a team of American snipers supplemented by multiple Kurdish sharpshooters on the Baghuz cliff to provide constant overwatch of the village. By rotating shooters, this detachment kept constant pressure on IS for about seven days, concentrating on quickly identifying and eliminating fighters emerging from tents, thereby diminishing their concealment benefits. An SOF officer involved in the operation and subsequent interrogations of IS fighters summarized their responses to the sniping operation thus: "Look, we can deal with the bombings, we can deal with the fighting, but please tell the snipers to stop shooting."[353] The officer further remarked that detainees cited the sniper pressure as interfering with their sleep.[354] Hence, this sniping operation significantly demoralized IS fighters in a way few tactics could.

IS Performance

Overall, several factors characterized IS defensive performance at Baghuz:

- The demodernization of Islamic State forces diminished the group's ability to conduct effective counterattacks and regain the initiative.

- IS relied on the large number of civilians in the village to delay advancing SDF forces with human shields, less proficient counterattacks, and large surrenders.

- IS maintained robust command and control capabilities and a large quantity of less lethal IEDs to help coordinate the defense and delay the SDF.

- A cadre of ideologically committed IS fighters kept defenders together and enforced harsh discipline on those attempting to flee.

Overall, these tactics show that IS stuck to its conventional style even as it was forced to fight in primitive conditions. Masses of civilians and conscripts/volunteers substituted for the VBIEDs, drones, various types of IEDs, and fearsome counterattacks that characterized IS defensive tactics at Mosul. Concealment of personnel and materiel in tunnels, trenches, tents, and caves complicated coalition targeting for airstrikes and indirect fire. These efforts, in turn, helped IS maintain its intimidating image at Baghuz, with SDF fighters exhibiting fear of any vehicle they saw, just as Iraqi forces did in Mosul; in some instances, they mistook vehicles carrying refugees and IDPs for car bombs and opened fire on them.[355] Uniquely prominent IS deployment of women and children on the battlefield forced SDF fighters to adopt a brutality that brought demoralization to a new level and led to several suicides among SDF personnel.

The battle of Baghuz further demonstrates that a determined force is not necessarily enough to defeat IS on the conventional battlefield; coalition support remains crucial. SDF fighters certainly showed their determination to endure the onslaught and complete their mission. At the same time, the SDF relied heavily on coalition support to strip IS of material assets, suppress IS fighters, and handle logistics. Indeed, the SDF failed to crack IS defenses in October 2018, when the coalition could provide only limited support, and U.S. advisors feared for the SDF's continued combat readiness. This situation echoes the fragile state of the anti-IS forces at the battle for east Mosul, where coalition advisors worried heavy CTS casualties could jeopardize the operation, and likely would have, if not for coalition assistance in adapting CTS tactics—from aggressive unsupported frontal assaults by light infantry with lightly armored vehicles to more methodical advances backed by airpower. Therefore, the Islamic State defense of Baghuz demonstrated that the group could conduct a successful conventional defense even when stripped of its materiel assets and faced with a determined foe, and that coalition support was often decisive in reversing this success.

Notes

1 See Ahmed S. Hashim, *The Caliphate at War: The Ideological, Organisational and Military Innovations of Islamic State* (London: Hurst & Company, 2018), 217; and Mary Grace Lucas, "ISIS Nearly Made It to Baghdad Airport, Dempsey Says," CNN, October 13, 2014, https://www.cnn.com/2014/10/12/politics/isis-baghdad-martin-dempsey/index.html.

2 Hashim, *Caliphate at War*, 217.

3 One Special Operations Forces officer recalled that about 80 percent of Iraqi military vehicles were inoperable after the first IS assaults, caused by an Iraqi failure to conduct regular checks on vehicles for fear of having to fix them. Iraqi units were frequently sent to frontline positions without sufficient ammunition or food, and escorts made virtually no effort to protect their convoys before routing when encountering IS ambushes. Author interview with U.S. SOF officer, November 2020.

4 Kenneth M. Pollack, *Armies of Sand: The Past, Present, and Future of Arab Military Effectiveness* (New York: Oxford University Press, 2019), 494–97.

5 Author interview with U.S. SOF officer, November 2020.

6 Pollack, *Armies of Sand*, 495–96.

7 Ibid.

8 On *inghimasi*, see also endnote 16 in chapter 2.

9 Author interviews with U.S. SOF personnel, November 2020–January 2021.

10 David M. Witty, *Iraq's Post-2014 Counter Terrorism Service*, Policy Focus 157 (Washington DC: Washington Institute, 2018), 7, https://www.washingtoninstitute.org/uploads/Documents/pubs/PolicyFocus157-Witty-2.pdf.

11 For example, in April 2014, an IS ATGM ambush destroyed a platoon of Iraqi T-62 tanks and MT-LB armored vehicles probing the al-Humaira neighborhood. On other occasions, IS used armor-piercing sniper rounds to strip engine blocks off Iraqi Humvees. Michael Knights, "The ISIL's Stand in the Ramadi-Falluja Corridor," *CTC Sentinel* 7, no. 5 (May 29, 2014): 9, https://www.ctc.usma.edu/the-isils-stand-in-the-ramadi-falluja-corridor/.

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13 Lead Inspector General for Overseas Contingency Operations, "Operation Inherent Resolve: Quarterly Biannual Report to the United States Congress, December 17, 2014–March 31, 2015" (U.S. Department of Defense, April 30, 2015), 10, https://www.dodig.mil/reports.html/Article/1150803/lead-inspector-general-for-operation-inherent-resolve-quarterly-report-and-bian/. Available figures for opposing force strengths and casualties for the Ramadi battle are inaccurate or unreliable. One article in the *Independent*, for example, claimed the IS attacking force had six hundred fighters and ISF troops had six thousand, but the authors did not explain how they reached these figures. However, there is evidence based on David M. Witty's discussions with two CTS advisors that IS devastated the ISF defenders, "Entire ISOF assault teams were killed by IS pressure plate mines. Many of the original soldiers trained by the United States starting in 2003 were killed in 2014 in [Anbar] province, and former advisors describe ISOF as being decimated there." See "The Fall of Ramadi Is a Significant Defeat for Isis," *Independent*, December 28, 2015, https://www.independent.co.uk/voices/fall-ramadi-significant-defeat-isis-a6788896.html; and Witty, *Iraq's Counter Terrorism Service*, 54, https://www.washingtoninstitute.org/uploads/Documents/pubs/PolicyFocus157-Witty-2.pdf.

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17 Ibid., 29–30.

18 Daniel R. Green, "Anbar After ISIS: Building Long-Term Stability in Western Iraq," *Special Warfare*, 2018, 13.

19 Reuters, "Iraqi Forces Push Islamic State from Western Town of Hit—State TV," April 8, 2016, https://www.reuters.com/article/uk-mideast-crisis-iraq-hit-idUKKCN0X51LF; see also a Vice documentary on the ISF's efforts to secure Anbar, https://video.vice.com/sv/video/fighting-the-islamic-state-with-iraqs-golden-division-the-road-to-fallujah/575052f347622d6745e44de6.

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220 Author interview with Brig. Gen. Matthew C. Isler, March 2021.

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conscripted city residents as SVBIED drivers, as indicated by frequently finding handcuffs attached to blown-up VBIED steering wheels. This use of children and conscription could help explain how IS maintained its manpower throughout the battle and distorted intelligence estimates. Author interview with U.S. SOF officer, January 2021.
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261 The bad weather and underdeveloped infrastructure seriously strained SDF logistics. One U.S. SOF officer supporting SDF operations recalled the difficulties SDF convoys encountered. In one instance, an SDF truck carrying mortar rounds blew up when a bump in a road detonated the explosives, killing two commanders. Author interview with U.S. SOF officer, December 2020.

262 Author interview with U.S. SOF officer, December 2020.

263 Author interviews with U.S. SOF officers, December 2020.

264 There are various reasons why the SDF's Arab contingent was less effective. One was the cultural distrust between Kurds and Arabs

that led to tense officer-soldier relations. A U.S. advisor noted SDF commanders tended only to their injured Kurdish brethren and neglected injured Arab fighters. Also, many of the Arab fighters were locals recruited by the SDF during its advance and thus were less experienced. Author interviews with U.S. SOF officers, December 2020.

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320 Author interview with U.S. military officer, November 2020.

321 These munitions were captured by overwhelming IS positions before they could be moved. A U.S. officer embedded with SDF fighters in the Hajin campaign's initial phase noted that they had not come by any weapons caches, further demonstrating that IS had a high enough level of organization to have plans and procedures in place to retrieve equipment in a timely way. This indicates IS could efficiently move materiel at first but found it increasingly difficult to do so later as it rapidly lost ground. Author interviews with U.S. SOF officer, December 2020.

322 Author interview with U.S. SOF officer, December 2020.

323 Author interview with U.S. SOF officer, December 2020.

324 Author interviews with U.S. SOF officers, November–December 2020.

325 Infrared sensors on IEDs enabled triggering the explosives upon certain conditions in the area of an IED. For example, some IEDs would go off only when their sensors registered a certain number of people present in the vicinity, or after a designated door was opened.

326 Photoelectric cell (photocell) triggers made IEDs light-sensitive, enabling triggering explosives once a window or door was opened and light would hit it.

327 Author interviews with U.S. SOF officers, November–December 2020.

328 Author interview with U.S. SOF officer, December 2020.

329 For example, SDF fighters suffered fewer shrapnel injuries and more burn wounds, which were less lethal, as the campaign progressed. This helps explain the SDF's lower casualty rate at the battle of Baghuz. Author interview with U.S. SOF officer, December 2020.

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341 Author interview with U.S. SOF officer, December 2020.

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343 See Truls Hallberg Tønnessen, "Heirs of Zarqawi or Saddam? The Relationship Between al-Qaida in Iraq and the Islamic State," *Perspectives on Terrorism* 9, no. 4 (2015): 56–57.

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4

Sources of IS Military Effectiveness

Through its robust style of conventional warfare, the Islamic State conquered large territories. The group's adversaries needed considerable U.S. and international support to crack IS defenses and still paid heavy prices to dislodge the jihadists. An apocalyptic ideology motivated the Islamic State's military campaigns, but how did the group develop its military skills? Indeed, Abu Musab al-Zarqawi's al-Qaeda in Iraq was a far cry in its military capabilities from Abu Bakr al-Baghdadi's IS. This chapter examines the sources of IS military effectiveness and posits that it can be traced directly to the group's development since 2003.

Previous research has focused on two possible explanations for IS military effectiveness: the influence of either the former members of Saddam Hussein's Baath regime or the foreign fighters from post-Soviet republics. IS military acumen, according to one explanation, derived from disenfranchised past members of Saddam's regime.[1] The other explanation claims that foreign fighters from post-Soviet republics—notably, veterans of the Chechen wars against Russia and the Russo-Georgian war of 2008, and the Chechen IS commander Omar al-Shishani in particular—were most responsible for the Islamic State's success.[2] This study, however, finds that a purported Baathist influence on IS was insignificant to its military effectiveness, while Russian-speaking foreign fighters did make a considerable, though not decisive, contribution.

Low Level of Baathist Influence on IS Military Effectiveness

Veteran members of Saddam Hussein's regime who later joined IS were certainly versed in important military and intelligence skills, but they acquired these skills from their experience as jihadist militants following Saddam's 2003 overthrow, not from their regime credentials.

Presence and Role of Former Baath Regime Members in IS

It remains unclear how many former Baath regime members joined the Islamic State. Kenneth Pollack counts as many as 150 ex-military officers,[3] and former U.S. intelligence officer Malcolm Nance tallies a striking 30,000.[4] This wide discrepancy is largely due to Pollack's counting of only former military officers while Nance counts "former Ba'athist intelligence officers." Furthermore, the 30,000 figure is most likely inflated as, later in his book, Nance misidentifies as former Baath regime members many key IS leaders, including two who were not even Iraqi.[5] Truls Hallberg Tønnessen found that eight out of thirteen of the original Islamic State of Iraq/ISIS leaders in the 2010–14 period were former regime members,[6] but Craig Whiteside's research later clarified that three of these were not actually regime members and that misinformation from various sources rendered much of this information on Baath regime membership inaccurate.[7] U.S. Special Operations Forces officers could only speculate about the role of former Baath regime members,[8] and one U.S. official remarked that the coalition found no evidence of major Baathist influence in IS despite the presence of ex-members of Saddam's regime.[9] The actual figure will likely remain a mystery for some time because of the secretive nature of Saddam's security and intelligence apparatuses.

There is evidence that the ex–Baath regime members played some role in IS. Lt. Gen. Sean MacFarland remarked the former Saddam-era military officers, due to their training and experience, were the "backbone of

the indigenous ISIS forces, just as they were for AQI and the Sunni Arab Resistance."[10] A trove of IS documents captured by the Syrian Liwa al-Tawhid opposition group and obtained by *Der Spiegel* revealed that a former Saddam-era intelligence officer called Haji Bakr (real name: Samir Abd Muhammad al-Khlifawi) played an important role in planning and organizing internal security between 2012 and early 2014.[11] Important early IS commanders like former Saddam-era infantry officer Abu Abdulrahman al-Bilawi, who was head of IS military operations in Iraq, add to this picture.[12]

Although these reports show that ex-Baath regime members did contribute to the early exploits and organizational capacity of IS, the role of their Baathist credentials per se should not be overstated, because, as Whiteside shows, the Islamic State's organizational structure more closely resembles that of AQI than Saddam's security apparatus.[13] Further, those who argue for the importance of Baathist influence in IS simply point to the high number of former regime members in the group and some ideological overlap between jihadism and Baathism to intuit a connection.[14] However, many former members of Saddam's regime who later became key IS leaders experienced about a decade of war in Iraqi jihadist and other militant groups before the rise of IS. Proof would be needed that these individuals' regime experience—rather than their later endeavors—made the jihadist group strong. Hence, this study argues that IS members drawn from Saddam's former regime were not valueless, but rather that their value came from their experiences *after* Saddam's fall, instead of before it. The question to be addressed now is, was there something about their experience under Saddam that accounted for their contributions to the Islamic State's military effectiveness?

Role in Tribal Engagement

Because of the Baath regime's heavy-handed suppression of unrest among various Iraqi population groups, there could be the perception that regime officials helped make IS better at tribal engagement, an important element of its effectiveness. However, there is little available evidence supporting this claim. The most important and high-profile data point for those who

endorse the Baathist influence argument is the role of Bakr in IS, as mentioned earlier.[15] Bakr was a colonel in Saddam's army who worked with the regime's air defense intelligence unit on weapons development.[16] Shortly after the 2003 U.S. invasion of Iraq, he joined AQI and was imprisoned in 2006–8 at the U.S. detention centers Camp Bucca and Abu Ghraib prison in Iraq, where he became closer with the future leaders of IS. He reemerged in January 2014, when Syrian rebels raided his safe house in Tal Rifaat and killed him. The thirty-one-page trove of documents retrieved from his hideout revealed his key role in planning and executing the Islamic State's 2013 takeover of territories in Syria, particularly by setting up offices to implement *dawa*, a term that refers to Islamic preaching and proselytizing and is used by jihadists to mean nonviolent efforts—as opposed to jihad—to spread their ideology. The group created *dawa* missions throughout the country to identify key individuals to potentially recruit or eliminate them in preparation for attacks on rebel groups.[17]

Bakr was certainly an important IS figure, but it was not his Baathist regime background that made him effective at coopting populations. If that were the case, then he and other former Baathists who joined AQI should have executed a more successful tribal engagement campaign in 2003–11, a period in which the jihadists' interactions with the tribes led ultimately to the massive *sahwa* (awakening) uprising against AQI/ISI.[18] Only after the group had to reckon with its decimation after the *sahwa* did it begin to make serious gains with the Iraqi tribes.[19] Bakr himself was, in fact, not part of ISI's top leadership until after his release from Camp Bucca. He survived the Iraq War, including the brutal crackdown on ISI leaders in 2010, experienced years of conflict against U.S. forces (except for his two-year imprisonment, when he forged connections with other veteran jihadists), and rose through the organization's ranks. It was, then, Bakr's experience after 2003 that informed his contribution to IS effectiveness, not his Baath regime credentials.

Contribution to Combat Effectiveness

Purported Baathist influence was not significant in the Islamic State's combat effectiveness. The kinds of operations IS performed well, which were rapid fast-paced assaults on the offensive and active probing and counterattacking when defending, were one of the biggest deficiencies of Saddam's army.[20] Even in Saddam's greatest success—the final offensives of the Iraqi military against Iran in 1988 during the Iran-Iraq War—Iraqi soldiers showed a persistently limited capability to maneuver, instead relying heavily on highly detailed planning based on U.S.-provided intelligence and overwhelming numbers and firepower.[21] Although IS did use suicide vehicle–borne improvised explosive devices, tanks, and artillery as firepower elements, it mostly did not meet the old Iraqi standard of 6:1 attacker-to-defender force ratios at the point of contact[22] for offensives and usually performed rapid follow-on assaults with small infantry groups. The constant counterattacks by IS on the defensive, constituting a strategy of active defense, were completely foreign to Saddam's forces, which preferred a static defense. Another difference was that Iraqi forces relied almost exclusively on preregistered, preplanned missions for artillery,[23] whereas IS often used drone imagery to adjust indirect fire in real time.[24] Hence, when former Baath regime commanders performed well in IS offensives, it was not their Baathist credentials per se, but rather experiences in Iraq's insurgencies and the Syrian civil war, that shaped their operational thinking.[25] As Kenneth Pollack writes, "Just having been an officer in Saddam's army was no guarantee that you knew what you were doing. The vast majority of them didn't."[26]

When considering the presence of ex-Baath regime members as a factor in military success, plenty of other case studies exist in the Iraqi military. For instance, Baath-era soldiers were present in the Iraqi army, which was by no means effective before or after 2003. They also led insurgent groups, like Jaish Rijal al-Tariqa al-Naqshbandia (Naqshbandi Army), many of which died out or were subsumed or eclipsed by jihadist groups. And ex-Baathists were present in the better units of the Iraqi military, such as the Counter Terrorism Service. High-level CTS commanders like Staff Lt. Gen. Abdul-Wahab al-Saadi,[27] Staff Gen. Talib Shaghati al-Kenani,[28] and Staff

Lt. Gen. Abdul-Ghani al-Asadi had served in the Baathist-controlled Iraqi armed forces for decades, some as far back as the 1973 Yom Kippur War with Israel.[29] Was Baathist influence what made the CTS strong?

It was U.S. training and a decade of constant fighting, rather than pre-2003 traits of the Iraqi military, that shaped the CTS. In the war against IS, the CTS demonstrated an aggressive fighting style that relied minimally on firepower and heavily on mobility with small units, hence their extensive use of Humvees.[30] A CTS column would not look, let alone move, like an Iraqi unit under Saddam's regime, which emphasized firepower and numbers. The CTS acted as the spearhead in nearly all ISF operations against IS, striking fast and aggressively taking the initiative in a way that strongly reflected its U.S. training.[31] As one U.S. officer remarked, expressing a common view among interviewees about the CTS, "You couldn't be prouder of those guys."[32] Rather than having a Baathist influence, the CTS acquired its operational style from U.S. training and its decade of experience in war before the rise of IS. Like the CTS, longtime IS members like the former Baath regime members who joined the group were more affected by their experiences in the 2003–11 Iraq war and then the Syrian civil war. Those influences—rather than Saddam-era military training and experience—were more influential regarding the conventional warfighting capabilities of IS.

The Significant Role of Russian-Speaking Foreign Fighters

In contrast, Chechen and other Russian-speaking Islamic State fighters brought important specialized conventional warfare experience and skills to the jihadist group. Some were involved in the Chechen wars against Russia, thus acquiring battlefield experience. The battles of Grozny, which occurred in 1994–2000, particularly stand out because they bear striking resemblance to major battles with IS (discussed later in this chapter). Still, in about 2014, the youngest IS member with direct experience in one of

the battles would be in his early thirties. A study of more than 4,600 IS foreign-fighter records found the average age of recruits, including those from former Soviet republics, was only mid to late twenties.[33] Hence, while some IS commanders likely did bring Grozny experience, the battles' role in shaping IS fighters' operational style should not be overstated.

Russian speakers also brought important knowledge and martial cultural traits. Vera Mironova notes that Russian speakers who joined IS often came with NATO and university training, serving as sniper, maintenance, and vehicle trainers and augmenting IS technical capabilities by working in weapons and drone factories and oil facilities.[34] U.S. officers who had experience facing Chechen IS fighters recalled the latter were generally well trained and grasped basic individual combat skills like marksmanship, fire and maneuver, and use of cover better than other IS members.[35] A U.S. general involved in the battle of Mosul described how Russian-speaking fighters would assign timekeepers within their units to ensure they did not stay in one area long enough for the coalition to organize airstrikes on their positions and leveraged mouseholes and tunnels to quickly move out of range. "Those were not typical tactics from inside Iraq. Those were brought in from outside Iraq," he said.[36] Another officer commented, "The Chechens are kind of like the Spartans of today. Their culture is bred around war."[37] The Russian speakers of IS were skilled fighters and technicians with a fierce reputation.

Omar al-Shishani: The Exception or the Rule?

Discussion of Chechen influence in IS often revolves around Georgian Chechen commander Shishani, who was presumably killed in mid-2016.[38] He served as an intelligence officer in the Georgian Defense Forces, benefiting from the U.S. training the Georgian army received at the time, and fought in the five-day 2008 Russo-Georgian war. One fellow Georgian service member called Shishani "a perfect soldier" while another described him as a "magnificent fighter" for his participation in a famous Georgian ambush

on August 9 that injured the commander of the Russian 58th Army.[39] Around the outbreak of the Syrian civil war, he traveled to Syria and became head of the jihadist group Katibat al-Muhajirin, later renamed Jaish al-Muhajirin wal-Ansar, leading mostly Arabs and other Chechens in northwest Syria, before pledging *baya* to IS in November 2013.[40]

Shishani was widely recognized by his adversaries as a competent military leader and became the only non-Arab member of the IS 2014 Military Council. General MacFarland noted Shishani was known for his ability to mass large forces quickly for fast-paced head-on assaults led by SVBIEDs (e.g., at Tabqa Air Base described here),[41] a capability several U.S. SOF officers recognized as a strength.[42] Part of his reputation derived from his leadership of other crack Russian-speaking fighters, and IS exploited his popularity to attract foreign fighters.[43] He played a prominent role in the battle for Menagh and Tabqa Air Bases, as well as senior roles in Kobane, other areas of northern Syria, and the 2014–15 Anbar campaign.[44]

Particularly telling is Shishani's leadership at the battle for the Syrian military's last stronghold in Raqqa province, Tabqa (or al-Thawra) Air Base, where about 1,400 Syrian soldiers were stationed, according to the Syrian Observatory for Human Rights (SOHR).[45] Toward the end of the battle on August 19–24, 2014, Shishani launched four large frontal assaults preceded by SVBIED strikes against the Syrian air base, which responded with defensive mortar shelling, airstrikes, tank fire, and machine guns. Simultaneously, he attacked the surrounding Syrian supply lines to encircle the base, demonstrating acumen at the operational level.[46] Four IS units composed of fighters from the former Soviet Union (al-Aqsa, Badri, Sabri, and Yarmouk Brigades) took part in the battle, an example of Shishani's preference for leading other Russian-speaking fighters.[47] According to an account of one of the IS fighters, Shishani threw a significant number of inexperienced fighters at the Syrian base,[48] leading to heavy casualties during night advances and a friendly fire incident in which a fighter firing an antiaircraft gun dismembered one of his comrade's legs.[49] On the evening of August 22, the SVBIEDs of the third assault destroyed the air base gates, but IS fighters failed to occupy it until August 24 when Syrian forces withdrew because their logistical capacity was so strained. IS fighters then entered

virtually unopposed.[50] SOHR reports 170 Syrian soldiers and 346 IS fighters died in the battle, with another 150 Syrian soldiers captured.[51] It was with this style of warfare, relying heavily on putting constant heavy pressure on his adversaries with mass frontal assaults, that Shishani made his reputation.

Shishani's methods were controversial among other jihadists. One fellow Chechen who fought alongside him, Khalid Shishani, accused him of using inexperienced fighters as "cannon fodder."[52] A former IS member from Dagestan claimed Omar al-Shishani was promoted to a senior command "due to the enormous casualties he was willing to sustain," with some fighters referring to him as "Abu Meat."[53] Indeed, Omar al-Shishani's aggressive frontal assaults sometimes backfired, as at Kobane and then the battle of Hasaka, where some IS detachments were completely destroyed.[54]

The Broader Role of Russian-Speaking IS Fighters

Beyond one commander, IS recognized the skills of Russian-speaking jihadists and actively recruited them. Between May 2015 and May 2016, IS published four issues of its Russian-language *Istok* magazine to better reach this audience.[55] It also made frequent overtures to people from post-Soviet republics in videos and statements, with Shishani himself appearing repeatedly to pass along the message.[56] It is no surprise then that, according to the Soufan Group, more than 8,700 people from post-Soviet countries traveled to Syria or Iraq to join IS, representing a plurality among IS foreign fighters by world region.[57]

In defensive operations as well, Russian-speaking jihadists continued proving their worth to IS. Even with the loss of Omar al-Shishani in 2016, they maintained their reputation as the group's elite. U.S. SOF officers who served in the Hajin, Syria, campaign said the Russian-speaking IS fighters were the most hardened, motivated fighters they encountered, sometimes effectively leading the groups of inexperienced, unskilled IS conscripts who increasingly made up its foot soldiery as the war progressed.[58] In addition, Barak Barfi notes that Chechen defensive operations against Russia in 1996–2000 were strikingly similar to IS defenses of Mosul and Raqqa;

Chechen rebels fought in their defense of the capital, Grozny, in platoon-sized strike groups organized down to the fire team level in planned three-ring concentric defenses, using ambushes, snipers, trenches, tunnels, and extensive mining and booby-trapping (even of corpses).[59] Just as in Mosul, the Chechens deployed antitank teams on the outer defenses to strip Russian formations of their armor before the urban fight, destroying or disabling 225 Russian armored vehicles, or just over 10 percent of the Russian armor commitment.[60]

It is thus impossible to discount the importance of Russian-speaking foreign fighters in IS. They brought useful military skills to the group and produced some of the finest field commanders in IS. They also accounted for a significant portion of the group's manpower overall—about 8,700 fighters according to the Soufan Group or as many as 14,000 per the Syrian military.[61] Although Omar al-Shishani was not particularly sophisticated on the battlefield, his execution of simple frontal assaults with fire support or SVBIEDs was often effective, albeit quite costly at times, as at Kobane. He also demonstrated a degree of competence at the operational level, with his encirclement maneuvers at Tabqa and possibly on a larger scale in Anbar around Ramadi. The technical skills the Russian speakers brought undoubtedly benefited IS IED production, a central aspect of its military power. Because of their experiences in the defense of Grozny against Russia, the Chechens, in particular, were well suited to the concentric defense and urban warfare IS waged in 2016–19.

These battlefield events make it tempting to attribute the success of IS to its fighters from post-Soviet republics. However, even though these fighters were a major boon to IS and most likely helped the group perform better than it would have without them, there were other IS members who proved just as competent. Uyghur jihadists, for example, had a fierce reputation among the adversaries of IS as well,[62] and North African foreign fighters had years of experience in Libya and the Syrian civil war (as discussed later in this chapter) that made them hardened warriors.[63] Iraqis dominated the IS senior leadership; remember that Omar al-Shishani was the only known non-Arab member of the group's high command in 2010–14.[64]

More so, non-Russian speakers planned and led many important battles.

Despite the similarities between the Grozny defense and Mosul and Raqqa defenses, the IS commanders at Mosul and Raqqa were not Chechens.[65] The Iraqis Abu Wahib[66] and Bilawi[67] were AQI/ISI veterans and senior commanders during the 2014–15 Anbar campaign. Another Iraqi, Abu Ayman al-Iraqi, was behind the infamous 2013 raid on Abu Ghraib that freed 500 inmates.[68] Non-Russian speakers were mostly in charge of defending Manbij, an important IS stronghold, in 2016, including the IS governor of the city, the Tunisian Abu Usama al-Tunisi.[69] In addition, one type of IS operation the Russian speakers could not have contributed significantly to was tribal engagement projects, which were pivotal to the group's exploits and required handling by people familiar with and immersed in the sociopolitical environments of Iraq and Syria. Hence, the Russian speakers who joined IS were significant additions, but they were not the main source of its military effectiveness.

Primary Source: The Jihadist Experience Since 2003

The best explanation for the source of IS military effectiveness is its organizational development since 2003. Three factors played a critical role in this process:

- The suicide bomb
- The 2003–11 Iraq war experience: urban warfare and tribal engagement
- The 2011–14 Syrian civil war: putting the pieces together

The Suicide Bomb

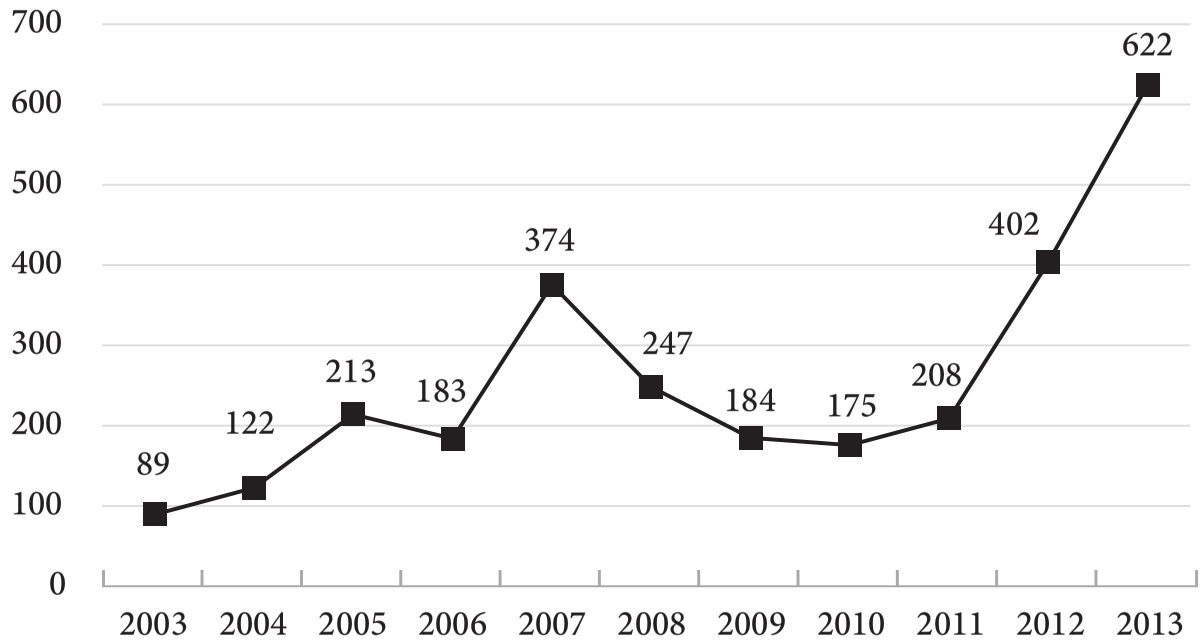
The Islamic State's use of the suicide bomb evolved dramatically. The suicide bomb had become an important symbol of the jihadist movement by 2003. It was a powerful, brutal weapon that allowed groups to signal their devotion and veneration of martyrdom. Jihadists in Iraq learned how

to use this weapon in ever deadlier ways, laying the groundwork for its use in conventional warfare. They pioneered the use of SVBIEDs, by 2013 conducting VBIED attacks 724 times to kill almost 8,000 people, according to data from the Global Terrorism Database (GTD),[70] which collects data on terrorist incidents.[71] (See figure 4.1 for statistics on suicide terrorism.) General MacFarland reported that already in the 2006 battle to oust AQI from Ramadi, the group was using SVBIEDs in defensive strikes on the attacking U.S. forces, a miniature example of the waves of car bombs it would deploy in Ramadi in 2014–16.[72] In 2007, an attack involving two hundred AQI fighters on a Mosul prison featured the detonation of fourteen IEDs emplaced on the roads around the site plus six SVBIEDs hitting the compound as police responded.[73] ISI also improved at using multiple SVBIEDs, sometimes coordinating them to destroy security fortifications[74] before sending another to exploit the breach and dispatching surveillance teams to accompany and film the drivers for propaganda and training purposes.[75]

AQI/ISI also built up an extensive bomb-making enterprise to sustain constant suicide attacks. On the outskirts of Mosul, the group established large IED factories, such as one found in 2007 containing almost 10,000 pounds of ammonium nitrate.[76] These factories even had specialized functions like one factory that focused on producing IEDs built to blend in with roadside debris.[77] Another factory in Fallujah specialized in building truck bombs, and U.S. and Iraqi forces captured it in 2007 to find an enormous VBIED under construction using a dump truck filled with explosive barrels.[78] These sites evolved into the Islamic State's massive network of IED factories.

As Hugo Kaaman notes, the pre-2013 VBIED chassis were designed to blend in with civilian traffic to approach a target undetected, but subsequent models were heavily up-armored—and easier to spot—because they needed to be adapted to survive on an open battlefield with increasingly well-defined frontlines.[79] This armoring was the last step in making the VBIED battle-ready, with heavy metal plating, grilles, and slats, making even civilian vehicles resistant against antiarmor missiles and tank rounds.[80] These VBIEDs were often enormous, such as a six-wheeled truck, with its wheels barely visible from the thick metal plates and extensive cage armoring, captured by Iraqi forces in March 2015.[81] Another captured in

Figure 4.1 Global Incidence of Suicide Terrorism, 2003–13



Syria in July 2015 was so heavily armored that the wheels and chassis were not visible, and particularly heavy plating and caging at the front provided extra protection for the engine, battery, and driver.[82]

Indeed, the suicide bomb remained the most potent and recognizable jihadist weapon even as IS conventionalized its warfare methods. In the July 2014 *Dabiq* article "From Hijra to Khilafa," IS acknowledged this fact, stating, "the most effective weapons in the arsenal of the mujahidin for creating chaos—vehicle bombs, IEDs, and *istishhadiyyin* [suicide attackers]."[83] Years of experience creating a bomb-making infrastructure with widely available, modifiable, and camouflageable civilian vehicles and executing increasingly complex VBIED attacks gave IS the most powerful weapon it deployed on the conventional battlefield. The group's exploits in the wars in Iraq and Syria further solidified its conventional warfare capabilities.

Urban Warfare and Tribal Engagement in Iraq, 2003–11

During the Iraq war, AQI/ISI gained important experience that defined its later way of war, particularly in urban combat and tribal engagement. Throughout the U.S. occupation, which lasted until 2011, the group embarked on a massive campaign of bombings, hit-and-run strikes, and tribal cooptation accompanied by urban assaults and defenses that schooled the jihadists in the tactics that informed their style of conventional warfare a decade later. Immediately after the U.S. invasion of Iraq in 2003, Zarqawi went about establishing AQI cells throughout the country, with major presences in Fallujah, Ramadi, Mosul, parts of Baghdad,[84] Baquba,[85] Samarra,[86] and al-Qaim.[87] By 2004, AQI and its allies had taken over Fallujah and drew the U.S. military's retribution that year when the jihadists ambushed and killed four U.S. contractors from the Blackwater private security firm.[88]

The ensuing fight in Fallujah, which occurred in April–May 2004, was AQI's first major urban battle and saw it deploy many of the same tactics IS would use. Teams of three to five fighters were AQI's basic fighting unit and communicated through cellphones, visual signals, and even pigeons.[89] They

deployed ambushes with rocket-propelled grenades, snipers, and mortar fire, using as strongpoints buildings fortified with barred windows and entryways and reinforced barricades that were breached only after multiple tank rounds. Preplaced weapons caches throughout the city allowed the jihadists to traverse the battlefield unarmed and disguised as civilians while defecting Iraqi soldiers and coopted city residents helped AQI anticipate and evade U.S. Marine Corps advances.[90] IS refined these tactics and used them to greater effect in the battles of Mosul and Baghuz.

Despite the narrow streets channelizing U.S. advances, AQI fighters avoided street fighting to evade American snipers and force the Marines to do hard urban clearing operations of individual houses and rely more heavily on airstrikes, tanks, and artillery.[91] The jihadists also began using information warfare, which IS would deploy extensively to support its military operations, releasing propaganda statements claiming U.S. "excessive use of force" that were disseminated by Arab news broadcasters like Al Jazeera and helped influence U.S. and Iraqi decisionmakers to impose a ceasefire lasting April 9–13.[92] The Marines ultimately ousted the jihadists, whose survivors melted away into the civilian population of the encircled city,[93] at the cost of 117 casualties, including 27 dead, according to a 2014 Marine Corps magazine article,[94] against approximately 200 AQI and allied fighters killed as reported by the Iraq Body Count nonprofit that tracks violent deaths in Iraq from 2003 onward.[95] The subsequent November battle for the city, when AQI fighters regained control after the United States left it, featured increasing jihadist sophistication, with greater use of tunnels, foxholes, and spider holes (camouflaged foxholes) to conceal their movement,[96] as well as casualty collection points with preplaced medical supplies.[97] IS would refine these adaptations in Mosul and other defensive operations to cope with coalition airstrikes and facilitate movement of materiel and personnel.

Other urban battles further presaged IS military capabilities. In the April 2004 battle of Samarra, AQI originally took control of the city when it attacked ISF positions, which "melted away" in a similar manner as entire divisions did in the Islamic State's 2013–14 campaigns in Iraq.[98] When U.S. and Iraqi forces arrived to retake the city, the jihadists set up defensive positions and waited until U.S. convoys entered the urban area before springing ambushes

with fighters on rooftops armed with assault rifles, machine guns, and RPGs immediately following mortar barrages and emplaced IED detonations.[99] The seizure and defense of Samarra was an early example of the storming (2014) and defense-in-depth tactics (2016–17) IS deployed at Mosul.

In the May 2005 battle of al-Qaim, AQI offered heavy, determined resistance to U.S. forces, fighting to the death from buildings, basements, and makeshift bunkers fortified with sandbags.[100] The jihadists wore body armor and a semblance of a uniform, prompting one U.S. commander to assess, "These are the professional fighters who have come from all over the Middle East. These are people who have received training and are very well-armed."[101] During the battle, AQI launched a counterattack with small arms, RPGs, roadside IEDs, and two SVBIEDs on an approaching U.S. Marine convoy.[102] AQI accurately fired mortar rounds at advancing units from the towns near al-Qaim, forcing the Americans into painful house-to-house clearances.[103] This performance revealed growing sophistication and acumen on the tactical-operational level that would culminate in the Islamic State's 2014–15 Anbar campaign.

The 2006–7 battle for Baquba created the template that IS used during the battle of Ramadi seven years later. It began during a U.S. raid to disarm the Shia and Sunni militias in the city, but it turned into a "daily battle" after ISI bombed a Shia political office. The group started executing frequent hit-and-run attacks with small arms, mortars, and IEDs, aided by Baquba's vegetation and surroundings that facilitated concealed movements as the dense palm groves of Ramadi later would.[104] In one instance in December 2006 in a town just south of Baquba, the jihadists lured U.S. forces by attacking the mayor's compound and then detonated several IEDs as a U.S. convoy approached and immediately subjected it to small-arms fire.[105] In April 2007, an SVBIED struck a Bradley fighting vehicle in Diyala province followed by a small-arms ambush on the trapped survivors.[106] The 135-man U.S. force held out heroically against ISI.[107]

With the acceleration of the *sahwa* after the surge, ISI began experiencing considerable setbacks that would help it refine its subsequent tribal engagement efforts. Reviewing the group's activities since 2003, an article in the October 4, 2018, issue of the Islamic State's *al-Naba* newsletter attributed

ISI's defeats in 2007 to Sunni tribes joining in the "malicious project, which they called the Awakening (Sahwa)."[108] Back then, the group had already begun reassessing the uncompromising approach of simply assassinating any "apostate" tribespeople.[109] For example, a 2009 ISI document known as the "Fallujah Memorandum" admired how U.S. forces were able to win over the tribes through "financial support" and suggested the organization should imitate this method through investment from its own coffers or plunder from the enemy.[110] Whiteside and Anas Elallame track the development of the group's Tribal Engagement Office, created in 2009 to more systematically communicate with the tribes in a bid to earn their support or acquiescence.[111] This new endeavor complemented ISI's campaign of assassinations against U.S.-aligned or resistant tribes.[112]

This self-reflection and evolution of the approach IS used toward the tribes set the stage for its post-2013 attitude toward them of both systematic engagement and targeted killing, as in the 2014–15 Anbar campaign. The Tribal Engagement Office's efforts to coopt the tribes gave IS a deeper knowledge of intertribal dynamics that it leveraged by playing clans off against each other, offering receptive clans economic incentives and some autonomy (cuts in oil and transportation businesses, governance responsibilities). Support or acquiescence from Sunni tribal groupings significantly aided the group's capture of the areas around Ramadi, including Fallujah and Hit. Just as telling is the IS inability to take Haditha because of heavy resistance from the area's dominant, *sahwa*-aligned tribe, the al-Jughaifi.[113] Thus, the smaller-scale assassination campaigns of AQI evolved into the systematic engagement and large-scale targeted killing efforts by IS that supported its military operations.

The War in Syria, 2011–14

As ISI seemed to be crumbling in Iraq in 2011, the group set its sights on Syria as a means of perpetuating the jihad. IS retrospectively referred to this period of relative weakness as a "test decreed by Allah."[114] Syria became ISI's new safe haven, with the civil war there its new battleground. The tactics

it deployed in Iraq would undergo further conventionalization in Syria as the organization confronted various rebel groups and the Assad regime for control of territory.

In the first half of 2011, the Syrian dictator Bashar al-Assad released hundreds of jihadists from prison in the hopes they would scupper the budding armed opposition to his regime by turning the moderates and extremists against each other. The ex-inmates—many with fighting experience and technical knowledge—formed groups like Jaish al-Islam and Ahrar al-Sham that would become important players in the ensuing civil war.[115] Back in Iraq, Baghdadi, who took over as emir of ISI in 2010, sent the group's *wali* (governor) of Mosul, Abu Muhammad al-Jawlani, together with an entourage of veteran ISI members, to link up with the jihadists in Syria and continue the jihad there.[116] Jawlani, a Syrian who joined AQI in 2003 and was close to Zarqawi, was accompanied by Abu Mariya al-Qahtani, an AQI member since 2004; Iyad Tubasi (aka Abu Julaybib al-Urduni, real name Iyad Nazmi Salih Khalil), a veteran of the Afghan jihad and aide and brother-in-law to Zarqawi; and four others with illustrious jihadist careers.[117] These men formed the nucleus for the jihadist group Jabhat al-Nusra, officially announced in January 23, 2012, after gathering the allegiance of numerous Syrian jihadist cells in late 2011.[118]

Jabhat al-Nusra began carrying out attacks in the ISI style against regime targets. On September 12, 2012, in the town of Saraqeb, the group launched the first video-recorded instance of an SVBIED strike in the Syrian civil war, using a truck loaded with five tons of explosives and partially up-armored with plates on the inside of the front windshield[119] to protect the driver, but still blend in with civilian traffic.[120] A week earlier, the group launched an SVBIED attack with seven tons of explosives on Hamdan military airport before assaulting it from multiple axes together with units from the allied Free Syrian Army and local tribal fighters.[121] Although the Syrian army managed to repel the attackers with air support, the incident was the first of many such coordinated SVBIED-led attacks that would bring the jihadists so many victories. The same month, Jabhat al-Nusra played a role in assaulting and capturing Tal Abyad on the Turkish border, facilitating the flow of foreign fighters into the country.[122] The group continued claiming

attacks in northwest Syria against regime personnel in Aleppo, Hama, Idlib, Damascus, and elsewhere.[123] Charles Lister noted that among the rebels, according to his interview with a member of the Liwa al-Tawhid group active in Aleppo, "Jabhat al-Nusra fighters and some independent 'Chechens'... gained a reputation for fighting without fear."[124]

In April 2013, ISI announced its direct involvement in the Syrian civil war (hence its renaming to ISIS—Islamic State of Iraq and al-Sham, or Syria) and absorption of Jabhat al-Nusra. This action followed a campaign by Haji Bakr, now a veteran ISI enforcer, recruiter, and facilitator, to solicit pledges of allegiance from elements of Jabhat al-Nusra and other jihadists in Syria because of ISI's fear of Jabhat al-Nusra's growing power. Despite Jawlani's refusal to accept the merger with ISIS and al-Qaeda's order to Baghdadi to stay out of Syria, a significant portion of Jabhat al-Nusra's members, including most of its foreign fighters, along with multiple other jihadist groups in the Syrian opposition, defected to ISIS.[125]

These defectors brought the experience they gained in the Syrian war back to ISIS. The group led alliances with other jihadist organizations in Syria that would give *baya* to it in 2013 and 2014, including Shishani's Jaish al-Muhajireen wal-Ansar,[126] the powerful Katibat al-Battar al-Libiyah,[127] and the Mujahedin Shura Council of Amr al-Absi,[128] who would become the Islamic State's governor of Aleppo and head of its media operations.[129] Another important new source of IS manpower, experienced personnel, and technical know-how was the group's 2012–13 strategy of breaking detained jihadists out of prisons in Iraq, a campaign it called "Breaking the Walls." In that time period the group carried out attacks on eight prisons and claimed that it broke out 824 people.[130]

By August 2013, IS was leading attacks on important Syrian strongholds, often with assault forces of more than one thousand fighters.[131] At Menagh Air Base, the group opened its assault with a coup de main on the Syrian military base's command center with an SVBIED built from a captured 2S1 Gvozdika self-propelled howitzer that had been up-armored, its turret removed, and the hull fitted with some 4.5 tons of explosives. IS and its allied rebels then overran the base within the next day.[132] An IS video documenting the lead-up to the battle showed fighters establishing positions for their initial break-in

by digging trenches and earthen berms. Infantry bearing small arms then advanced through the trenches and berms, drawing out armored Syrian forces for "tank hunters" to eliminate with RPGs and self-propelled guns.[133] These antitank teams would appear again fighting against U.S.-produced Abrams tanks in Iraq, and this style of fast-paced assaults punctuated by SVBIED shock strikes—often targeting enemy commanders—recurred in IS offensive operations; its assault on Abu Ghraib prison stands out, with its use of some twelve SVBIEDs and infiltration of the prison guard before the assault.[134]

Also in August was the ISIS-led offensive on Latakia province in northwest Syria involving two thousand fighters, many of them foreigners, armed with tanks and rocket launchers as well as small arms, according to a source close to the Syrian government.[135] Attacks in the area featured SVBIED strikes, including one that killed fifteen members of the National Defense Force, a pro-government militia.[136] The offensive managed to capture thirteen villages but succumbed to a counterattack by Syrian military forces.[137] Although ending in failure, the offensive was an example of how jihadist attacks increasingly relied on mass and rudimentary combined arms.

The Syrian war stagnated as the Syrian military pushed back against jihadist and rebel advances and the rebels began to fracture, but ISIS continued to demonstrate growing capabilities. In northwest Syria, the group erected complex trench systems to conceal its movements and materiel. A U.S. SOF officer remarked that in one instance, the group had constructed a trench system spanning forty-five kilometers that was wide enough to accommodate two tanks driving abreast.[138] ISIS manpower continued swelling and expanded considerably as the group violently split with the Syrian opposition in late 2013, received more defections from rebel groups, and, through 2014, seized control of major Syrian cities, including Raqqa, Deir al-Zour, and parts of Aleppo.

Operating jointly with other rebel groups, most prominently Jabhat al-Nusra and Ahrar al-Sham, since 2013 in Deir al-Zour, ISIS used weapons it had captured in Iraq to attack its former allies, took control of half the city in April 2014, and besieged the areas still held by the regime.[139] The jihadists sustained a steady tempo of operations, amassing up to 14,000 fighters

to support the siege and attacks in the province through 2017, according to a pro-government source.[140] IS weathered airstrikes first by the Assad regime and later by Russians and struck boldly at military targets with its signature SVBIED attacks until the arrival of as many as 50,000 Syrian troops (according to the pro-Assad *al-Masdar* news) finally ended the siege, which lasted more than three years.[141]

By 2014, ISIS tactics had evolved dramatically, going from hit-and-run strikes, to failed urban stands and urban assaults, to large-scale operations based on the suicide bomb. The wars in Syria and Iraq informed this development while the entrance of foreign fighters, particularly Chechens and other Russian speakers, boosted IS military capabilities. Some Iraqi former members of the Baath regime ultimately also contributed to the jihadist group's success, but it was the decade of war experience starting in 2003 that made them useful to the group, not their Baathist credentials. Therefore, the Islamic State military campaigns of 2013–19 followed an evolutionary pattern reflecting its learning from the preceding decade. This will become even clearer upon examination of IS operations in the *wilayat* outside Iraq and Syria.

Notes

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2 Daveed Gartenstein-Ross, "The Islamic State's Stalled Offensive in Anbar Province," *War on the Rocks*, November 25, 2014, https://warontherocks.com/2014/11/the-islamic-states-stalled-offensive-in-anbar-province/; Bassem Mroue, "Omar al-Shishani, Chechen in Syria, Rising Star in ISIS Leadership," *Christian Science Monitor*, July 3, 2014, https://www.csmonitor.com/World/Latest-News-Wires/2014/0703/Omar-al-Shishani-Chechen-in-Syria-rising-star-in-ISIS-leadership; and Michael Winfrey, "IS Grooms Chechen Fighters Against Putin," *Daily Star*, October 11, 2014, https://www.thedailystar.net/is-grooms-chechen-fighters-against-putin-45148.

3 Kenneth M. Pollack, *Armies of Sand: The Past, Present, and Future of Arab Military Effectiveness* (New York: Oxford University Press, 2019), 502.

4 Nance, *Defeating ISIS*, xix.

5 Ibid., 97.

6 Truls Hallberg Tønnessen, "Heirs of Zarqawi or Saddam? The Relationship Between al-Qaida in Iraq and the Islamic State," *Perspectives on Terrorism 9*, no. 4 (2015): 56.

7 Craig Whiteside, "A Pedigree of Terror: The Myth of the Ba'athist Influence in the Islamic State Movement," *Perspectives on Terrorism* 11, no. 3 (2017): 5.

8 Author interviews with U.S. Special Operations Forces officers, November 2020–January 2021.

9 Author interview with U.S. official, January 2021.

10 Email conversation with Lt. Gen. Sean MacFarland, February 2021.

11 Christoph Reuter, "Islamic State Files Show Structure of Islamist

Terror Group," *Der Spiegel*, April 18, 2015, https://www.spiegel.de/international/world/islamic-state-files-show-structure-of-islamist-terror-group-a-1029274.html.

12 Whiteside, "Pedigree of Terror," 4–5.

13 Ibid., 8–10.

14 E.g., Richard Barrett, "The Islamic State" (Soufan Group, November 2014), 22–25, https://thesoufancenter.org/wp-content/uploads/2017/05/Islamic-State-Oct-23-FINAL-FOR-PRINT-Rebrand-031317.pdf.

15 Reuter, "Islamic State Files Show Structure," https://www.spiegel.de/international/world/islamic-state-files-show-structure-of-islamist-terror-group-a-1029274.html.

16 Ibid.; and "TSG IntelBrief: The Islamic State of Iraq and Greater Syria: A Primer," *IntelBrief*, June 13, 2014, https://thesoufancenter.org/tsg-intelbrief-the-islamic-state-of-iraq-and-greater-syria-a-primer/.

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5

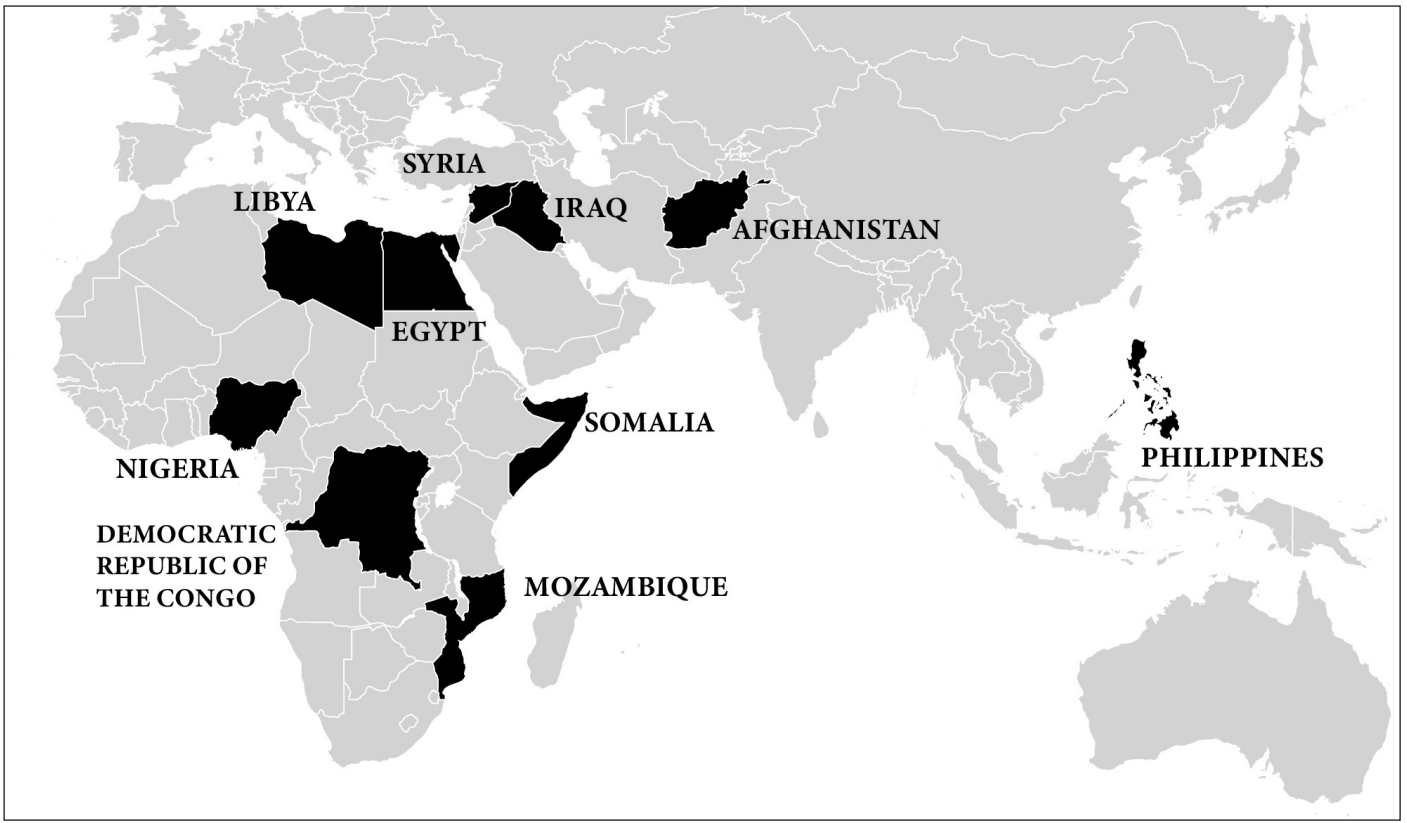
IS Military Operations Outside Iraq and Syria

Many studies focus on Islamic State military operations in one theater or another, and this study has so far spotlighted Iraq and Syria. IS expanded to other countries, however, revealing important information about how the group fought under different operational conditions such as geography, organizational structure, and culture. This chapter examines major IS military operations in Libya, Sinai, the Philippines, Afghanistan, Nigeria, Somalia, and Central Africa.[1] (See figure 5.1 for a map of IS *wilayat*.) It first outlines the group's establishment of *wilayat* and the military campaigns in these countries before discussing the significance of this expanded scope for Islamic State prowess in conventional warfare.

Libya

On November 13, 2014, "the Islamic State officially announced its expansion into the Arabian Peninsula, Yemen, Sinai Peninsula, Libya, and Algeria, and the establishment of *wilayat* therein."[2] IS was particularly interested in Libya, which it viewed as ripe for conquest because of its ongoing civil war and history of jihadist activity. As IS stated in the *Dabiq* article just quoted, among all the new *wilayat*, Libya had "the strongest presence of the Islamic State… It has received *muhajirin* [foreign fighters] from many lands, a number of them performing *shahadah* ["martyrdom" or suicide] operations against the *murtaddin* [apostates] to further consolidate the Islamic State. Also, many of

Figure 5.1 Countries Where Islamic State Has Declared *Wilayat* and Conducted Major Military Operations



the *muhajirin* in Sham [Syria] came from Libya and spilled their noble blood to revive the Khilafah there."[3] It then explained that Libya, in the midst of a civil war since 2011, was a perfect theater of operations for IS because of "the abundance of arms and the condition of *tawahhush* [mayhem] then ideal for jihad."[4]

IS had a deliberate strategy of sending experienced members to lead operations in Libya. As Aaron Zelin showed, in the 2011–17 period, 2,600–3,500 foreign fighters from "North Africa, the Middle East, the Horn of Africa, West Africa, Western Europe, the Balkans, North America, and South and Southeast Asia" traveled to Libya to join jihadist groups, mostly IS.[5] The highest portion of these were Tunisians, accounting for about 1,500 fighters.[6] The groups Ansar al-Sharia in Libya (ASL) and Ansar al-Sharia in Tunisia (AST) did much toward getting these fighters to Syria. Then, in 2014, the foreign fighters began streaming from Syria back to Libya to serve the Islamic State's designs to expand the caliphate into that country.[7]

The returnees were organized under Katibat al-Battar al-Libiyah (KBL), a jihadist militia that appeared in Syria in 2012, pledged allegiance to IS in June 2014, and was composed of North African, French, and Belgian foreign fighters, as well as others with experience in Afghanistan and Iraq.[8] Supplementing this hardened cadre were pro-IS jihadists in Darnah, Libya, and defectors from ASL with whom the traveling IS members established contacts.[9] The former ASL members brought heavy weapons, including tanks, artillery, antiaircraft guns, and vehicles they had captured in the course of the civil war.[10]

IS then established itself in the Libyan coastal cities of Darnah and Sirte using the same methods it did in Iraq and Syria. Darnah, a city with a history of jihadist activity, was the primary destination for KBL fighters, who solicited pledges of allegiance from other local groups and formed the dominant presence there.[11] Sirte was previously under ASL control, but a significant portion of its members defected to IS, which then disputed control of the city.[12] IS then met little resistance as it consolidated its rule, exploiting local tribal weaknesses caused by the ongoing civil war, sympathy for jihadists among younger tribesmen, and the divide between tribes that either supported or opposed the former regime of Muammar Qadhafi.[13]

In mid-2015, IS was ousted from Darnah under pressure from outside the city by the Libyan National Army, a major actor in the civil war, and internal opposition from local jihadists under the Mujahedin Shura Council of Darnah and Its Suburbs, an umbrella group that formed as IS increasingly threatened their power.[14] By early 2016, IS forces were concentrated for a defense of Sirte, the city almost nine hundred kilometers west of Darnah where IS had established a strong presence since 2013 through extensive engagement with the population and defection of the local ASL branch and other armed groups to IS.[15] U.S. intelligence officials at the time estimated there were five thousand to six thousand IS fighters in Libya.[16] Militiamen who fought IS in Sirte estimated 2,000–2,500 jihadists were in the city initially.[17] The ensuing battle, which raged May–December 2016 between the remaining IS forces and a coalition led by the other main faction of the civil war, the Government of National Accord (GNA), would witness a familiar, determined IS defense.

Suicide bombing was an important aspect of the defense. As GNA forces advanced on the outskirts, IS delayed them with SVBIEDs, including an attack in May ninety kilometers west of the city killing thirty fighters[18] and another in June of three SVBIEDs targeting a field hospital west of the city and a group of GNA fighters in the city's southeast.[19] In Sirte, IS often deployed waves of SVBIEDs, with one attack in August featuring five car bombs.[20] Throughout the battle, IS sustained its supply of VBIEDs with production factories, one of the largest of which the GNA captured in July.[21] Similar to the desperate fighting of the Hajin pocket two years later, toward the end of the battle in December, IS deployed several women as suicide bombers posing as civilians to get close to GNA fighters.[22]

The entrance of U.S. airpower in August 2016 significantly hindered the use of vehicles by IS. In late August, a GNA fighter reported witnessing IS using wheelbarrows to transport materials for fear of being targeted in vehicles.[23] U.S. Africa Command reported that it conducted 495 airstrikes in Libya in the August–December 2016 period, killing eight hundred to nine hundred IS fighters, a significant number of the 1,700–2,500 who died in the fighting overall.[24] The GNA also had naval bombardment support from the five-inch gun on a U.S. Marine Corps amphibious assault ship.[25]

Other delaying actions further impeded the GNA advance. As in Mosul and Hajin, IS fighters dug in with tunnels, weapons caches, and emplaced IEDs that supplied them and kept the GNA on its toes throughout the battle.[26] Also, the GNA attributed delays to IS use of civilians as human shields in the city, as the jihadist group was doing at Mosul and would do at Baghuz. IS snipers were particularly deadly, in one case proving decisive in stopping a GNA advance on the port of Sirte that cost the GNA 176 casualties, including 36 dead (from all causes, not just sniping).[27] In the battle's later stages, IS fighters escaped from Sirte and harassed the GNA from behind the frontlines, with one GNA commander reporting about four hundred such escaped jihadists in mid-November.[28] A GNA fighter also noted the Islamic State's determination, saying, "We faced unbelievable resistance. They won't leave their posts even when houses are collapsing on them."[29]

Eventually, the GNA was able to retake Sirte. It claimed that it killed 2,500 IS fighters,[30] though the U.S. State Department claimed 1,700 killed.[31] The GNA took about four thousand casualties, including at least 712 dead, by December according to a *Libya Herald* report,[32] which is consistent with earlier hospital[33] and operation room reports.[34] With IS use of SVBIEDs, defensive preparations, snipers, and human shields, the battle of Sirte looked much like the group's defensive operations in Iraq and Syria at the same time or, in many cases, later. The extensive IS engagement of the population and tribes also mirrored IS tactics in Syria's rebel-held areas and Anbar.

Sinai

These factors appeared again in IS operations in the Sinai Peninsula. Jihadism in Egypt has a history going back to the 1950s, when Egyptian president Gamal Abdul Nasser cracked down on Islamists (many associated with the Muslim Brotherhood), who then formed jihadist ideologies while imprisoned. Upon release, they created jihadist groups, such as al-Gamaa al-Islamiyah and Harakat al-Jihad, and formed hideouts in the Nile Valley's mountains and deserts to train for armed resistance. From 1979, some Egyptian jihadists associated with Nile Valley groups traveled to participate in the Afghan jihad

and colluded to perpetrate the 1981 assassination of Egyptian president Anwar Sadat.[35] By early 2014, Ansar Beit al-Maqdis, a group composed of veteran jihadists including escapees and releases from Egyptian prisons since 2011,[36] emerged as a dominant jihadist player in the Sinai Peninsula.[37] In 2013–14, it demonstrated budding military capabilities, conducting attacks on Egyptian security forces almost daily, including a November 2013 SVBIED attack that killed eleven soldiers and wounded thirty-five,[38] and the January 2014 downing of an Egyptian military helicopter with a shoulder-launched surface-to-air missile.[39] On November 10, 2014, the group pledged allegiance to IS and changed its name to Wilayat Sinai, or the Sinai Province of IS.[40]

This new extension of IS established itself in the northeast coast of the Sinai, between the Rafah and al-Arish areas. Wilayat Sinai made a concerted effort to become embedded among the locals, leveraging ties with the area's Ramailat and Sawarka Bedouin tribes, from which many of the group's own leaders hailed.[41] However, this tribal engagement was not as successful as efforts by IS in Iraq, because the Egyptian military kept close contact with the Bedouins on security matters by, for instance, creating a tribal militia under the Ministry of Interior in November 2012 and securing polling stations in the presidential elections that year.[42] The Egyptian military also increased its counterterrorism operations in the Sinai by sending more troops to the region[43] in May 2013 and again in July following its coup against Egypt's Islamist president Mohamed Morsi.[44] Therefore, the Egyptian military was not shorthanded when faced with a renewed jihadist insurgency in the region.

Wilayat Sinai began appearing in IS videos carrying out sustained attacks on Egyptian military targets and overrunning army positions. One video from May 2015 tracks a raid from the planning phase in the early morning through the day, resulting in the capture of Egyptian soldiers and equipment such as ammunition and armored vehicles.[45] Fighters are seen using cover, handling their weapons well, and pressing the attack with pickup trucks colored with matching desert camouflage against fleeing troops. The video also shows a jihadist making a large payload for a suicide truck bomb by

wiring together at least twelve barrels of explosives on the truck bed and a scene of its detonation to collapse a structure.[46]

Wilayat Sinai launched a large offensive on July 1, 2015, to occupy Sheikh Zuwaid, a city of sixty thousand inhabitants near the northeast coast of the Sinai.[47] According to group claims and media reports, the offensive started at about 7 a.m. Cairo time and lasted about twelve hours, and IS assaulted twenty-one targets with small arms, rocket-propelled grenades (RPGs), antitank guided missiles, mortars, and heavy machine guns on the road between al-Arish and Rafah, including SVBIED strikes on two checkpoints and the al-Arish Officers Club.[48] These attacks involved supplementary mortar strikes and IED emplacements to impede Egyptian reinforcements.[49] The quick insertion of at least five pickup-mounted antiaircraft autocannons complicated Egyptian counterattacks with Apache helicopters.[50]

Wilayat Sinai briefly controlled most of the city and besieged the police station before Egyptian F-16 aircraft began forcing them to retreat.[51] In an official statement two days later, Wilayat Sinai attributed its defeat in the battle to "heavy bombing" from the aircraft, causing it to retreat "to preserve the lives of the Muslims."[52] Reports from the Egyptian military and local media counted thirty to sixty-four casualties on the army's side and up to a hundred casualties for the jihadists.[53] Egyptian Maj. Gen. Hisham El-Halaby reported the initial attack consisted of seventy fighters and grew throughout the day to at least three hundred.[54]

This style of warfare closely resembled IS operations like the assaults on Abu Ghraib or Ramadi, likely also a result of fighter exchange with the core group in Iraq and Syria. In September 2015, the Egyptian Ministry of Foreign Affairs noted "foreign fighters now possessing the ability to infiltrate borders" as a major factor in rising terrorism in the country.[55] Wilayat Sinai also introduced into its ranks Egyptian returnees from the jihad in Iraq and Syria.[56] The Soufan Group counted as many as a thousand Egyptians traveling to Iraq and Syria, and a portion of these could indeed have returned to fight for Wilayat Sinai.[57] In 2017, a spokesperson for the Tarabin tribe, which was supporting the Egyptian army's counterterrorism operations, claimed 80 percent of Wilayat Sinai members were foreigners.[58]

Although the group's videos usually do not identify featured fighters, at least two members interviewed in Wilayat Sinai media had "al-Muhajir" in their noms de guerre, an indication they were foreign fighters.[59] Thus, the presence of foreign fighters and veteran returnees arguably accounted for the operational connection between Wilayat Sinai and IS in Iraq and Syria.

Philippines

In 2014–15, sixteen Philippine jihadist groups pledged *baya* to IS, creating a *wilayah* under the leadership of Filipino longtime jihadist and leader of the Abu Sayyaf Group (ASG), Isnilon Hapilon.[60] Two other important figures in the Philippines *wilayah* were the brothers Abdullah and Omarkhayam Maute, the founders of the feared Maute group.[61] The *wilayah* had a relatively local composition. Of its 400–500 members, about 40 were foreign fighters, mostly from Indonesia and Malaysia as well as at least one each from Pakistan, Saudi Arabia, a post-Soviet republic (Chechnya), Yemen, India, and Morocco, according to a Philippine intelligence estimate in May 2017.[62] The *wilayah*'s leadership contained jihadists like Hapilon and the Mautes, who had been involved in Philippine Islamist uprisings for decades and led cadres of skilled fighters.[63]

After the creation of the Philippine *wilayah*, militant activity in the country increased significantly. According to data from the Global Terrorism Database (GTD), the annual number of terrorist incidents since 1970 in the Philippines reached a peak of 712 in 2015, up more than 20 percent from 2014, and remained higher than any year before 2013.[64] In particular, attacks on police and military targets mushroomed, totaling 1,297 in 2014–18, more than all the 1,125 attacks on such targets recorded in the GTD for the 1970–2013 period.[65] Jihadist attacks showed increasing sophistication as well, with the infamous Christmas Eve 2015 attack as an example. According to a local Philippine Army colonel, the attack involved about 150 members of the Bangsamoro Islamic Freedom Fighters (BIFF) group,

which gave *baya* to IS the year before, raiding multiple Christian towns in the Muslim-majority island of Mindanao, kidnapping and killing residents and ambushing soldiers who went to retrieve the bodies.[66]

Such raids then became large-scale confrontations against security forces. On January 25, 2015, large numbers of BIFF members and allied militants—including families and individuals related by kinship to the militants—engaged the Philippine Special Action Force (SAF), an elite unit of the Philippine police, while it was conducting an operation to eliminate the BIFF bomb maker Zulkifli Abdhir in the Mindanao town of Mamasapano.[67] Although the SAF managed to kill Abdhir, the operation met a massive jihadist response with small arms, grenades, RPGs, and mortars. At a cornfield overlooking a river in one part of the SAF's defensive perimeter, some three hundred militants opposed the thirty-six members of the 55th Special Action Company (SAC) from sunrise to late morning, when the jihadists crossed the river and killed thirty-five men of the 55th SAC at close quarters as the latter ran out of ammunition.[68] Earlier, the 42nd and 45th SACs moved to relieve the 55th but were stopped when militants opened fire on them from fortified positions in a marshland area. Notwithstanding police reinforcements including two armored vehicles doubling the size of this force, the SAC commandos in the marshland became trapped, partially because the vehicles were unable to traverse the terrain.[69] The fighting ended early in the afternoon when the Philippine government agreed to a ceasefire with the local fighters permitting the remaining SAF commandos to leave.[70] Overall, the SAF reported 44 of the 392 police force members killed[71] against at least 18 militants, according to Mohagher Iqbal, the peace negotiator of one of the jihadist groups, the Moro Islamic Liberation Front, involved in the fight.[72]

In February and November 2016, the Maute group engaged the Philippine Army in the Mindanao town of Butig. Before the first battle, Maute established itself in the town through extortion and intimidation of local residents and attacks on government electrical towers.[73] The February battle began when, according to military spokesperson Brig. Gen. Restituto Padilla, forty Maute fighters raided an army camp near Butig and added forty fighters when the soldiers gave determined resistance.[74] The army sent reinforcements supported by bombers, helicopters (MG-520 Defender gunships), and

105 mm howitzers that drove away the fighters.[75] General Padilla reported three soldiers and twenty jihadists dead from the clash.[76]

During the next several months, Maute honed its strength and had sporadic engagements with the Philippine Army until losing its main stronghold in the Butig area, Camp Darul Iman, in June. There, soldiers found rudimentary IED production facilities and fifteen IEDs built from 105 mm howitzer shells, mortar rounds, and grenades in propane tanks filled with nails.[77] Already, there was evidence of growing fortification and governance capabilities, with classrooms used to indoctrinate town residents and a plan found on a whiteboard of how to strategically deploy the IEDs.[78] Additionally, in August, Maute conducted a successful assault on Lanao del Sur jail in Marawi city with twenty fighters armed with small arms, disarming the guards and springing eight jihadists and fifteen other inmates, according to local police.[79]

The Maute counteroffensive on Butig came on November 26 when two hundred fighters, and later an additional hundred, stormed the town with small arms and RPGs, according to Philippine military estimates.[80] Over the five days of fighting, the army committed airpower, artillery, and ground reinforcements to retake Butig.[81] Ultimately, the military won the day at the cost of thirty wounded against sixty-one dead Maute fighters.

A battle also broke out on April 9, 2016, between ASG fighters and the Philippine 1st Infantry Division in the town of Tipo-Tipo on Basilan island. It began when more than a hundred ASG fighters ambushed soldiers in the town, setting off a ten-hour firefight that ended with eighteen dead soldiers against five dead jihadists, according to Philippine military spokespeople.[82] One Philippine officer noted the "terrain suited the militants" and at least four of the soldiers were beheaded, revealing ASG tactical and psychological warfare acumen.[83] Fighting continued until April 14, with the army estimating a total 31 dead jihadists out of the 120 who took part in the battle. Fifty-six soldiers were wounded.[84]

The jihadists' largest confrontation took place May–October 2017, when the IS-aligned groups occupied and defended Marawi, a city of two hundred thousand bounded on two sides by Lake Lanao and bisected by the Agus River. The fight began on May 23, characteristically with an army raid on a

house used by Hapilon in advance of a plan to declare Marawi as the capital of the Philippines *wilayah*.[85] All the elements of the jihadists' prior battles reemerged on a larger scale: some one hundred fighters intercepted and pinned down the initial Armed Forces of the Philippines (AFP) force; raids throughout the city involving up to five hundred fighters by AFP estimates[86] secured strategic points like the city hall, hospital, police station, prison, army camp, and outer checkpoints; and ambushes on the road stopped AFP reinforcements.[87] The jihadists took advantage of the plethora of houses built with thick concrete—constructed by the city's residents to cope with periodic clan feuding—to prepare fortified positions.[88] A police superintendent remarked that the fighters "put ammunition and different arms in different places" around the city that sustained their defensive operations throughout the battle, demonstrating the same foresight by IS in Mosul.[89] Teams of fighters armed with rifles and RPGs conducted numerous ambushes on advancing armored personnel carriers, disabling the vehicles and pinning down AFP forces for days on end.[90] For instance, Philippine troops took nearly two months to secure the Mapandi Bridge and lost thirteen marines in a single fourteen-hour engagement on June 9 in a prior attempt to take it.[91]

The Marawi fight also saw the introduction of new tactics, reflecting knowledge exchange with IS in Iraq and Syria. The AFP commander of forces in the city particularly attributed increased IED and sniping capabilities to the presence of foreign fighters, including some from the Islamic State's core territories in Iraq and Syria.[92] Snipers were a constant hindrance, occupying high-rise buildings and other structures throughout the city and forcing the attackers to advance with caution.[93] Snipers in the dense urban terrain constantly confined advancing units into buildings, as one Vice News team embedded with Philippine special forces documented,[94] at times forcing AFP soldiers into booby-trapped houses.[95] Buildings rigged with explosives were commonplace and the jihadists sometimes took civilian hostages and broadcast their presence to deter the AFP. Other times, they conscripted civilians to fight for them.[96] The jihadists also used drones for reconnaissance and intelligence for counterattacks.[97] Ultimately, the military relied heavily on airstrikes, helicopter gunships, and artillery to grind down the defenders and retake the city.

Both sides paid a heavy price. Marawi lay in ruins, with 1.1 million residents of the city and its environs displaced.[98] According to Philippine government and military sources, government forces suffered 168 soldiers and police officers dead and more than 1,400 wounded[99] of the 6,500 who participated in the offensive.[100] As estimated by the government, eight hundred to one thousand jihadists died[101] in the fighting,[102] including Hapilon and all seven Maute brothers.[103] The small number of those captured—likely no more than twenty, based on reports of surrenders—suggests the jihadists maintained a high will to fight and die at Marawi.[104]

Other *Wilayat*

Libya, Sinai, and the Philippines were the sites of the Islamic State's most significant military operations outside of its core areas of operation through 2019. Later and elsewhere, IS *wilayat* carried out military operations on a smaller scale. For what they show about IS and its future, several of them are worth discussing—namely, those in Afghanistan, Nigeria, Somalia, and Central Africa (specifically, Mozambique and the Democratic Republic of the Congo).

Afghanistan

The Afghanistan *wilayah*, known as IS Khorasan (IS-K) province, formed in 2014 under the leadership of Pakistani jihadist Hafiz Saeed Khan, who started as a Taliban fighter in 2001 and was a founder of Tehrik-e-Taliban Pakistan.[105] He gave *baya* to IS in October 2014 with a cadre of other veteran jihadists, and over the next two years, he received defectors from other major jihadist organizations in Afghanistan and Pakistan, including the Taliban, Haqqani Network, and Lashkar-e-Taiba.[106] Documents captured from IS-K in 2016–17 suggest it has maintained extensive communications with the core IS and enjoyed financial, media, and governance support from it.[107]

IS-K's earlier activities dealt mostly with winning support from local

populations. It initially approached the Taliban diplomatically, sending emissaries to coordinate its establishment of bases in Nangarhar and Helmand provinces.[108] The group went about setting up schools[109] and propaganda campaigns to preach its message, often in mosques or face-to-face with families in their homes.[110] It also refrained from levying taxes, sold food at discounted rates, and offered competitive salaries to prospective members to gain legitimacy in the impoverished areas in which it operated.[111] Research at the Royal United Services Institute, which interviewed Afghan and Pakistani security officials as well as IS-K members, found the group had as many as 8,500 members in Afghanistan in 2014–15, indicating its recruitment efforts were successful.[112]

From January 2015, IS-K engaged in open hostilities against the Taliban and Afghan government forces. In Helmand, it abruptly switched from cooperating with the Taliban to raiding it and Afghan government areas and executing commanders, though the stronger Taliban presence there coupled with a swift U.S. air intervention defeated IS-K in Helmand by February.[113] Nonetheless, in Nangarhar, IS-K gained robust local support and ousted or challenged the Taliban in the districts of Chaparhar, Deh Bala, Kot, Achin, Shinwar, Nazyan, and Dur Baba, all near the Pakistan border.[114]

ISK demonstrated significant tactical proficiency. Videos released by IS-K show robust training programs and disciplined fighters with a grasp of individual combat skills as well as cooperation among teams, a feature not always present in IS cadres.[115] In battle, their skills included proper weapon handling and firing and establishing concentric attacks on Afghan government positions to overwhelm them.[116] Another video from August 2016 documents the planning and execution of a raid on an Afghan government position on a hilltop. The IS-K fighters began the attack in the early morning, using mortar and rifle fire to suppress the soldiers while maneuvering closer and eventually overrunning the position.[117] The same month, a U.S. military official said American troops supporting the Afghan army were forced to retreat when IS-K attacked their position.[118] IS-K also showed it could generate mass, on at least one occasion, in June 2016, committing about six hundred fighters to an assault on Afghan security forces, according to an Afghan intelligence official.[119] This proficiency reflected the high-quality

fighters absorbed by IS-K during its formation, many with experience in the Taliban's and other Afghan jihadists' campaigns of conventional warfare.

However, superior firepower in the form of airstrikes again proved decisive in pushing back ISK. An aggressive air campaign rapidly reduced ISK's fighting capacity, as in one Nangarhar engagement in June 2016 in which 95 of at least 131 fighters killed in a battle with Afghan police were lost to airstrikes, according to the region's governor.[120] Airstrikes conducted on the evening of February 1, 2016, killed twenty-nine IS-K fighters according to the governor's spokesperson.[121] Airpower was also important for eliminating IS-K leaders, including the group's leader[122] and its emir for Kunar province.[123] On April 14, 2017, the U.S. military, in the first and only instance of operational use at the time of writing,[124] dropped its most powerful nonnuclear bomb—the GBU-43/B Massive Ordnance Air Blast—on an IS-K hideout, killing at least ninety-four fighters, according to an Afghan army spokesperson.[125] Thus, U.S. airstrikes decimated IS-K's fighting power, forcing the jihadists from their territory and reducing their strength from the thousands to 600–700 as of 2017, according to U.S. officials.[126]

Nigeria

IS West Africa province (ISWA) emerged from a *baya* given to IS in March 2015 by Abubakr Shekau, the leader of the notorious Nigerian jihadist group Boko Haram.[127] The group had been at war with the Nigerian government since 2009, and when it pledged allegiance to IS, it already controlled a substantial territorial base in the Lake Chad Basin of northeastern Nigeria bordering Chad and Niger.[128] Thus, the group had considerable experience going toe-to-toe with the Nigerian Army and became infamous for its brutal terrorist attacks on civilians, such as the 2014 kidnapping of 276 schoolgirls in Chibok, many of whom remain missing at the time of this writing.[129]

Boko Haram/ISWA developed its own style of conventional warfare relying heavily on massed frontal attacks with larger units that differed from the small-unit ethos of IS. In a May 2014 video titled "The Battle of Maiduguri 2," the group showed this style, beginning with a convoy of pickups and trucks

(at least eleven shown on video), each packed with fighters advancing toward the city of Maiduguri.[130] Waves of dismounted fighters mostly wearing civilian clothing and armed with assault rifles, machine guns, and RPGs charged toward the city through open plains firing indiscriminately ahead, often from the hip. Fighters on armed pickup trucks (technicals) with mounted heavy machine guns also swarmed the city.[131] When ISWA began publishing videos under the banner of the Islamic State, this style remained unchanged, except that mortars and some SVBIEDs were prominently introduced.[132]

This tactical style exposed the jihadists to heavy losses. The Nigerian military claimed that during an offensive in February 2015 to retake eleven towns and villages, the combined Nigerian, Nigerien, Chadian, Cameroonian, and Beninese forces with air and artillery support killed more than three hundred Boko Haram fighters.[133] In March, during an advance preceded by airstrikes on the border town of Malam Fatori, the Nigerien military reported having killed more than a hundred fighters in exchange for just three soldiers wounded.[134] In April, the group lost 156 fighters when it attacked a Nigerien army base on the island of Karamga in Lake Chad, though also killed were forty-six soldiers, according to the Nigerien government.[135]

After the heavy fighting of 2014–16, as well as infighting when Abu Musab al-Barnawi was named the ISWA leader and Shekau then split from the group,[136] ISWA activity decreased.[137] Nonetheless, from 2017 onward, the group has reemerged more disciplined and equipped with the Islamic State's signature up-armored SVBIEDs, and it has regained much of the territory it had lost in previous years.[138] In 2018, a video emerged for the first time of an ISWA SVBIED factory, in which a jihadist can be seen cutting and welding metal plates.[139] In 2019, two up-armored SVBIEDs made from pickup trucks appeared in an ISWA video.[140]

ISWA has also improved its tactical proficiency and captured more sophisticated weapons from the Nigerian military in turn. In the two ISWA videos titled "And Kill Them Wherever You Overtake Them," released in 2019 and 2020, ISWA fighters appeared more disciplined, fighting more dispersed when in the open, though occasionally still bunching together. They also made better use of cover and maneuver, largely staying behind earthen berms until pressing forward when their opponents begin retreating. They

wore matching dun-colored outfits and drove technicals with matching camouflage, signs of increasing organization.[141]

The group used its improved skills to overrun multiple bases, including one in Metele in November 2018 in which 44–118 Nigerian soldiers were killed according to security, eyewitness, and IS sources, one of seventeen attacks on military bases reported in the July–November 2018 period.[142] As a result, ISWA has captured sophisticated weapons, including tanks, armored cars, armored personnel carriers, long-range 122 mm rockets, multiple rocket launcher systems, and heavy 122 mm artillery.[143] Although the Islamic State in Iraq and Syria was unable to use these types of weapons to great effect because of coalition air coverage, how ISWA will employ them fighting a weaker adversary remains to be seen.

IS knowledge exchange can account for much of ISWA's improvements. A detailed report by Vincent Foucher of the International Crisis Group, which interviewed Boko Haram/ISWA defectors, tracks how this exchange occurred. The group first established contacts with IS after the June 2014 declaration of the caliphate, with Arab interlocutors providing ideological and military advice, over Telegram and other messaging applications as well as in person.[144] In one notable instance in October 2014, Boko Haram fighters captured a device they did not recognize from the Cameroonian military and referred it to their IS advisors, who replied that it was a drone and provided instructions on how to assemble drones that ISWA would use to build their own. IS interlocutors also sent advice via video on how to make AK-47 ammunition from the gunpowder in artillery shells and weld armor plates on VBIEDs.[145] Perhaps most importantly, IS sent a group of at least six "Arabs," led purportedly by Libyan jihadist Abu Obeida, to conduct courses for all ISWA's commanders over several months. The IS instructors stressed the dangers of deploying massed, unsupported frontal infantry assaults and promoted a military doctrine based on maneuvers with small units more akin to the IS style. As one defector said, "They taught us about antiaircraft techniques, armour, infantry. We benefited so much from them. They went to fight with us. They observed us, explaining that our way was so dangerous that it was like suicide."[146] Again, knowledge exchange boosted the new *wilayah*'s capabilities.

Somalia

The Islamic State in Somalia (ISS) emerged in 2015, when Abdulqadir Mumin, the head of a small al-Shabab outpost in the northern Somali region of Puntland, gave *baya* to IS.[147] Most of its fighters were drawn from Mumin's subclan[148] of Majerteen Ali Saleban as well as Yemenis in Somalia and possible support from pirates in their area of operation around the Galgala Mountains.[149] Despite al-Shabab's violent rejection of Mumin's overtures to IS and the ensuing crackdown on IS supporters within al-Shabab,[150] a former Puntland security official noted ISS has formed training camps, indoctrination programs, and military units with specialized fields of operation while succeeding to some degree in recruiting from outside of Puntland.[151]

In late October 2016, ISS took over the Somali port town of Qandala.[152] The assault consisted of a group of fifty ISS fighters conducting a surprise attack from a single axis, easily overwhelming the small number (possibly no more than several) police officers present there.[153] The group planned the attack in advance, with cells having embedded themselves in the town beforehand.[154] Puntland security forces retook Qandala on December 7, 2016, with an attack from both land and sea,[155] causing the ISS fighters to retreat after a short fight resulting in twenty-five to thirty dead jihadists, according to Puntland officials involved in the fighting.[156] A Puntland security official estimated that the ISS force grew from 50 to 120 during its occupation of Qandala and as of late 2020 had about 150 members. The official commented that the ISS fighters have demonstrated tactical competence, and Puntland forces found left behind a four-by-four Mitsubishi being prepared as an SVBIED.[157] These factors, along with the IS acknowledgment of ISS fighters as "soldiers of the Khilafah" in the November 2016 issue of its *Rumiyah* magazine, suggest an exchange of knowledge between IS and ISS.[158]

Central Africa

Although ISS continues to be confined to its mountain havens, it has become a logistical hub for Wilayat Central Africa, officially recognized by IS in April 2019.[159] The United Nations terrorism monitor found in its February 2021

report that ISS has facilitated the movement of "trainers, tactical strategists and financial support remitted from the ISIL core" to groups in the Democratic Republic of the Congo (DRC) and Mozambique.[160] This information helps explain the rise in IS *wilayat* activity in those two countries.

On March 23, 2020, the Mozambican jihadist group Ahlu Sunna wa Jamaah (ASWJ) briefly occupied the oil-rich port town of Mocimboa da Praia.[161] This takeover followed growing signs of links between IS and jihadists in Mozambique, including one Telegram post from 2018 showing ten Mozambicans giving *baya* to the group[162] and IS claims of attacks in Mozambique beginning in June 2019.[163] It fits with the shift toward IS, then, that ASWJ again assaulted and occupied Mocimboa da Praia in August 2020.[164] The group also showed increasing sophistication in its operations, doubling its quantity of attacks and going "from exclusively attacking isolated villages and individuals to launching complex, dual-front attacks against district capitals."[165] On March 24, 2021, it used its augmented capabilities to occupy another town important for gas projects, Palma, which the military retook after ten days of fighting.[166] On August 9, 2021, a joint Mozambican-Rwandan military force finally recaptured Mocimboa da Praia a year after the town had fallen.[167]

A similar pattern emerged in the DRC, where the Allied Democratic Forces (ADF) has intensified its activities. The ADF began as a Ugandan insurgent group in the 1990s but was increasingly confined to DRC's North Kivu region as Ugandan security forces ousted it from the country.[168] Over time, the group became closer to IS, and in 2018, the U.S. Treasury Department sanctioned two IS financial facilitators who helped move funds to the ADF, and Congolese troops found IS documents in a raid on an ADF camp near Beni. In 2019, the group began referring to itself as the Islamic State.[169]

On October 20, 2020, the ADF launched a complex attack on a Congolese prison, reflecting ADF links to IS.[170] The assault involved three thrusts: two on nearby bases and a main effort to seize the prison. This plan prevented Congolese security forces from reinforcing the prison and enabled the jihadists to overrun the compound, freeing at least 1,300 inmates.[171] IS claimed the attack, which followed its call two months earlier in *al-Naba* for its supporters to conduct prison breaks.[172]

The *Wilayat* and IS Military Effectiveness

The varied experiences of the Islamic State's external *wilayat* in conventional warfare shed light on important insights. Three factors stand out:

1. The *wilayat* generally fought better when their fighting styles conformed to the tactics used by IS in Iraq and Syria.

2. *Baya* to IS was a trigger for greater military conventionalization.

3. The *wilayat*'s experiences further demonstrated that the source of IS strength was primarily its organizational and ideological development.

First, the most successful *wilayat* were those that used methods similar to those of IS in Iraq and Syria. The most obvious example is Libya, which had many fighters with direct experience in Syrian civil war and Iraq war jihadist operations and who behaved almost identically to the core group. The conquests of Darnah and Sirte primarily through cooptation of locals, including tribes, and the subsequent defense of Sirte mirrored operations like Islamic State seizures and defenses of Mosul and Raqqa. IS in Libya, by holding these cities for two years and imposing a heavy cost on the GNA forces to retake Sirte, exceeded the exploits of any other *wilayah*.

Other *wilayat* achieved lower degrees of success. In Sinai, despite having demonstrated a markedly IS-like operational style of rapid attacks led by SVBIEDs, the jihadists were less able to coopt the local population and crucially unable to weaken the relatively well-prepared Egyptian military before engaging it. In the Philippines, a small cadre of skilled fighters, often with local population support, carried out sharp infantry assaults, fielded adept snipers, and later deployed IEDs as booby traps and mines but lacked the firepower, particularly VBIEDs, that gave IS an edge in Iraq and Syria. The same is true for the *wilayat* of Afghanistan and Somalia. Although ISWA's distinctive mass swarming style with often less skilled fighters brought some success, it also brought heavy losses.

At the same time, conforming to IS style increased *wilayah* military

effectiveness. For example, ISWA's increasing use of up-armored SVBIEDs and heavy weapons, along with its improved organization and coordination, has allowed it to more effectively attack military targets and recover its territory. The ADF and ASWJ, following closer links to IS, have carried out well-coordinated assaults, such as the ADF's recent prison break attack, reminiscent of the IS raid on Abu Ghraib. As IS-linked groups in the Philippines begin to adopt suicide bombing and SVBIED tactics, their operations will likely improve.[173] In the Sinai, the Islamic State has shown signs of increasing effectiveness as well: in July 2020, it occupied the villages of Qatiya, Iqtiya, al-Janayen, and Merih after a simultaneous attack on a nearby army base in Bir al-Abd.[174] This, along with the discovery of at least 437 IS weapons caches by the Egyptian military and mounting incidents of booby-trapped houses in IS areas, further shows improving performance as a result of the adoption of the core organization's style.[175]

Moreover, *wilayat* with greater access to the core organization's sources of strength perform better on the battlefield. In Libya, the presence of high numbers of IS members who fought in Iraq and Syria contributed to the similarity in their tribal engagement and defensive tactics. For example, the IS chief recruiter and population engagement liaison in Libya was Abu Nabil al-Anbari, a veteran Iraqi IS member who joined AQI following the U.S. invasion, was detained in Abu Ghraib, and served as IS governor for Salah al-Din province after escaping.[176] At the battle of Sirte, IS senior commanders were also experienced jihadists, such as the head of IS in Libya Saudi national Abu Habib al-Jazrawi,[177] replaced after his death by the Syrian and Iraq wars veteran Jalaluddin al-Tunisi.[178] The extensive production and use by IS of VBIEDs in the battle, as well as its emplaced IEDs, tunnels, and proficient snipers, further reveal the core organization's footprint. Tellingly, the other *wilayat* did not have as much access to these personnel and materiel and were thus less effective than the Libyan *wilayah*.

Why did IS invest so much in the Libya *wilayah* versus other *wilayat*? One reason is simple opportunism. As mentioned, IS recognized the state of "mayhem" Libya was in at the time, with no single civil war faction powerful enough to dominate the country, and the group had thousands of veteran fighters who hailed from Libya and other North African countries. Many were

used to traveling between theaters of jihad, with experience fighting not only in North Africa, but also in Afghanistan, Iraq, and Syria. This familiarity with jihad in the Libyan context, combined with proximity to Iraq and Syria and the existing jihadist presence in ASL and AST, made Libya an easy target for IS. No other *wilayah* had all these advantages.

Second, *wilayat* pursue conventional warfare capabilities after giving *baya* to IS, revealing territorial control as an important implication of aligning with IS. As security studies scholar Joel Day notes, there is a prevailing notion among experts that armed groups ally with each other to gain access to material resources like money, equipment, and operational support that increase a group's survivability and capability.[179] He also suggests that alliances help groups outbid their adversaries through "brand realignment," or adjusting their messages to appeal to broader audiences.[180] However, this study's analysis of the experience of IS *wilayat*, most of which have made overt efforts at capturing and holding territory, suggests that *baya* to IS carries important ideological and strategic expectations for military conventionalization. Because IS claims it is the Caliphate restored, any organization that wants the Islamic State's recognition must show it can help defend, expand, and govern its empire. Tactical, financial, media, personnel, and other support all must serve this purpose.

This commitment comes with considerable risks because the conventional battlefield can bring disaster to a group without the proper skills, but IS *wilayat* have by and large shown they are willing to accept this risk. Many groups that made *baya* to IS, including Ansar Beit al-Maqdis, ASG, Maute, ADF, and ASWJ, had almost no experience in conventional warfare, but all of them rapidly conventionalized their insurgent and terrorist methods—as IS did with the tactics it learned in the Iraq and Syria wars—and taking land became a major objective. Ambushes, bombings, and raids evolved into coordinated assaults as well as defensive minefield emplacements, booby-trapped houses, and operational maneuvers. For example, ASG, Maute, and the other Philippine groups that joined IS learned urban warfare techniques through large-scale fighting in Mamasapano, Butig, and Tipo-Tipo before deploying them effectively to capture and defend Marawi. Those who came in with experience in conventional warfare, like ISWA, leveraged their links to

IS to improve their capabilities, as in ISWA's more recent operations against military bases in Nigeria.

Finally, these insights support the argument that the military effectiveness of IS derives primarily from its organizational and ideological development. The Libya *wilayah* is a case in point because it operated almost identically to the core organization. The leaders of IS in Libya were mostly jihadist veterans of the Iraq and Syria wars.[181] The *wilayat* in Nigeria and the Philippines fought differently from IS at first, when they relied on their respective organizational experiences, but over time have increasingly conformed to the operational style of IS. Wilayat Sinai adopted the IS style quite early, likely a result of knowledge exchange with the core and the ideological expectation to capture territory that came with *baya*. Thus, the greatest source of conventional warfare acumen for the *wilayat* was the extent to which they could access experienced IS personnel and bomb making for suicide tactics.

The four main elements of IS military effectiveness—organizational innovation, retaining the initiative, shaping operations, and the will to fight—remain robust in the *wilayat*'s operations. The most successful enterprise, the Libya *wilayah*, showed a high level of organization at the battle of Sirte, used SVBIED-led counterattacks to seize the initiative, benefited from extensive engagement with local populations and competing jihadist groups, and fought almost to the last fighter in defending Sirte.[182] Despite signs of a well-organized attack in Wilayat Sinai's Sheikh Zuwaid offensive, it had limited shaping capabilities because of resistance from the Bedouin tribes, and it could not cope with Egyptian airpower. In Somalia, the group had strong population engagement but could neither exert much influence on nor effectively contend with its better-armed adversaries.

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6

Assessing the Islamic State's Way of War

Throughout the Iraq war, the Islamic State grew increasingly effective at using suicide bombs, ambushes, improvised explosive devices, and other signature jihadist tactics. Against U.S. forces at Fallujah, Ramadi, and elsewhere, it put up determined territorial defenses, thus developing the basics of the operational style it would use at Mosul, Raqqa, and Baghuz. The group gained valuable tactical experience battling the world's best fighting force and sent its veterans to Syria. Finally, shortly before IS fighters won the battle for Menagh Air Base in August 2013, the group attracted mass defections and pledges of allegiance from veteran jihadists in Jabhat al-Nusra and other groups. When IS columns rolled into Mosul in June 2014, their commanders were largely mainstays of the jihadist world since at least 2003. Some had been at the 2004 battles for Fallujah.[1] It was, therefore, the jihadist experience in more than a decade of fighting that shaped the Islamic State's way of conventional warfare.

This history makes it hard to assert that the Islamic State's success in conventional warfare came out of nowhere or that its prowess was really the work of a cabal of former Baathists or an elite group of Chechens. Al-Qaeda in Iraq (AQI), the Islamic State of Iraq (ISI), the Islamic State of Iraq and al-Sham (ISIS), Jabhat al-Nusra (in Syria), and IS fought in a strikingly evolutionary fashion quite dissimilar from Saddam's army. Also, IS

developed its operational style before the entrance of Omar al-Shishani and the group's large Russian-speaking contingent, which in turn leveraged this style well. Instead, the Islamic State's development of the suicide bomb, combat experience in the wars in Iraq and Syria, and absorption of skilled jihadist operatives prior to its initial conquests converged to produce the IS way of war.

These points remain consistent in an analysis of IS military operations outside Iraq and Syria, where varying operational and organizational situations offer a comparative perspective, as detailed in chapter 5. The group's experience in Libya is particularly informative because its operations were so similar to those in Iraq and Syria, but the *wilayah* lacked any known members who were either post-Soviet nationals or former Baathist officers.[2] Rather, its core leaders and fighters were longtime jihadist veterans of the wars in Iraq and Syria, bringing with them the know-how to enable IS to operate effectively in Libya. Other *wilayat* drew on their own pre-2014 experiences and developed their own operational styles but increasingly conformed to the IS conventionalization model as they aligned with the group. Those that learned to fight more like IS also showed growing capabilities to take and hold territory, as exemplified by the *wilayat* in Nigeria, Mozambique, and the Democratic Republic of the Congo.

What were the main components of the Islamic State's conventionalization model? How do they translate to military effectiveness? This chapter situates the Islamic State's model of conventional warfare as a "way of war," or preferred warfighting method, in its own right. Three components characterize the IS way of war:

1. A unique variant of hybrid warfare: civilian vehicles and armored suicide vehicle–borne IEDs

2. Low-tech disruptive innovation: suicide bombers as autonomous weapons and an air force built of small drones

3. Professionalism: variably skilled riflemen fighting alongside proficient specialists

Finally, analysis of these three components illuminates how IS expressed its military effectiveness in organizational innovation, shaping operations, will to fight, and seizure of the initiative.

Hybrid Warfare and Conventionalization

Analyses of the Islamic State's fighting style often present it as a flavor of "hybrid warfare."[3] Frank G. Hoffman popularized that term to refer to wars that "incorporate a range of different modes of warfare, including conventional capabilities, irregular tactics and formations, terrorist acts including indiscriminate violence and coercion, and criminal disorder."[4] He posits Hezbollah as a prototypical practitioner of hybrid warfare because of the group's integration of insurgent-style ambushes, decentralized command and control, and small cellular units with conventional defensive fortifications and weapons (most notably antitank guided missiles) and information warfare.[5] Security studies scholar Andrea Beccaro uses the hybrid warfare concept to frame how IS uses conventional warfare to take territory, terrorism to terrorize and harass its enemies, and technology to cleverly deploy propaganda, suicide attacks, and drones.[6] Scholar Omar Ashour's analysis of IS tactics hypothesizes that the group's ability to easily shift among and integrate terrorism, guerrilla fighting, and conventional warfare drives its military effectiveness.[7]

The hybrid warfare framework is useful for characterizing IS and past jihadist warfighting capabilities. The IS experience adds another layer to it: the conventionalization of traditionally terrorist or insurgent tactics.[8] The weapon that most contributed to IS effectiveness in conventional warfare—the suicide bomb—is not conventional but rather is an essential jihadist terrorist or insurgent one. Yet IS used this same weapon to wage conventional warfare, as a shock weapon to overwhelm enemy positions at Menagh Air Base, Ramadi, and elsewhere. In the defense of Mosul, IS used SVBIEDs in the way an army might deploy an artillery barrage or airstrike to beat back advancing columns with firepower. It even employed car bombs as rudimentary autonomous weapons, having commanders, motorcycle

runners, and drone operators direct or inform route guidance for drivers or change course after launch according to operational needs.[9] That is, IS employed suicide tactics initially developed to conduct terrorist attacks as part of its conventional operations, rather than adopting new weapons to acquire conventional warfare capabilities. It thus conventionalized suicide bombings.

Indeed, traditionally "conventional" weapons, such as Humvees, armored personnel carriers, tanks, heavy artillery, aircraft, and ATGMs, were not usually important elements of the IS style of conventional warfare. Tanks, towed artillery, and ATGMs, of which IS initially acquired a considerable amount, were significant only at certain times, as in the group's advance on Kobane, where it relied heavily on superior firepower to push back the People's Defense Units. Thereafter, reliance on concentrated firepower became a liability because of the ease with which coalition airpower could target slow-moving heavy weapons and SVBIEDs. IS used ATGMs in defensive operations as part of antitank ambushes but also to strike stationary targets such as buildings and fortified positions.[10]

Mobile assets, like Humvees and armored personnel carriers, were perhaps most effectively deployed as SVBIEDs. Under threat of air attack, IS preferred to use civilian vehicles, most notably motorcycles and pickup trucks, to transport personnel and materiel. A plethora of technicals mounted with machine guns or air defense cannons and larger civilian vehicles like trucks or vans, some up-armored, were the most common means of achieving mobility for IS columns in attacks. IS regularly used captured military vehicles, such as Humvees or BMPs, as chassis for SVBIEDs.[11]

That modified civilian vehicles were the preferred mobile element of IS was likely a result of expedience as well as the constant need for VBIEDs. Military vehicles better filled the need for carrying explosives than did civilian vehicles; they were already armored, easy to handle in off-road driving, and sturdy enough to hold a ton of explosives.[12] Using military vehicles as SVBIEDs also meant IS would not have to deal as much with their specialized maintenance, because the vehicles were to be destroyed. Additionally, military vehicles were more conspicuous to aircraft, and thus less survivable as transportation or strike assets, so they were more effectively expended

as car bombs against a well-armed adversary like the Syrian or Iraqi army.

Furthermore, technicals were cheaper, plentiful, and relatively easy to maintain, so they were more useful as armed or armored mobile attack assets, troop transports, or SVBIEDs in assaults and, when disarmed, inconspicuous logistical vehicles. Civilian cars, pickups, trucks, and vans could also be up-armored as needed. Thus, from the IS perspective, it made perfect sense to favor nonmilitary vehicles in its style of conventional warfare. The ability to up-armor, arm with explosives, or mount heavy guns at will was key to the Islamic State's conventionalization of civilian vehicles.

The Islamic State's Low-Tech Disruptive Innovation

Accordingly, it was low-tech innovation, rather than acquisition of advanced weapons, that gave IS the tools to succeed in conventional warfare.[13] More precisely, IS excelled at "disruptive innovation," the term coined by business analysts Joseph L. Bower and Clayton Christensen to describe new technologies that are generally simpler than their precursors but offer benefits that a more advanced technology may not, such as the simplicity, portability, and lower power of a personal computer versus the complexity, immobility, and high power of a mainframe computer.[14]

For IS, this disruptive innovation most prominently appears as the suicide bomb, which is effectively a very smart guided weapon, superior in many respects to more technologically complex systems. SVBIEDs boosted the group's firepower and served as shock weapons and precision munitions, among other purposes. Of course, IS did not invent the VBIED as a battlefield weapon (AQI used it in this way), but it was the first to use car bombs on an industrial scale and with heavy armoring as a key element of its style of conventional warfare.

IS built a rudimentary, disruptive air force. Over-the-counter quadcopters and small fixed-wing drones could carry out reconnaissance missions and, when weaponized with IEDs and grenades, serve as aerial delivery platforms and kamikaze drones. Such deployment in intelligence and combat

functions was the first ever recorded use of small drones in this way, and even the advanced, well-equipped U.S. and Iraqi armed forces imitated the tactic in their operations.[15] Although not as lethal as traditional bombers or Hellfire missiles, IS drones substituted for their effects by sapping their adversaries' morale.

The group was also disruptive in its tactical and operational doctrine.[16] The IS army relied heavily on highly determined fighters and had a relatively low demand for coordination and discipline. As military analyst Gabi Siboni pointed out, IS "deems military training of secondary importance as compared to the effort that it puts into cultivating the combatants' desire to fight."[17] He found training programs typically lasted no more than a month, and while they did focus significantly on developing basic combat skills, they also incorporated ideological indoctrination.[18] One pro-IS source suggested that training lasted thirty to fifty days for local fighters and ninety days for foreigners and allotted equal time to developing combat skills and studying sharia (Islamic law), at the end of which trainees took final examinations on sharia and gave *baya* to "one of the senior sheikhs of the state."[19] As such, IS occasionally demonstrated combined arms tactics (simultaneous coordination of multiple combat functions, including infantry, artillery, drones, ATGMs, SVBIEDs, and other weapons), and some IS fighters stood out as skilled warriors, but the most consistent feature of IS operations was its members' iron determination. Accordingly, IS operations typically relied not on collapsing the enemy through maneuver or overwhelming him with firepower but rather on breaking the enemy with psychological operations and highly determined, demoralizing strikes.

Varying Levels of Professionalism

IS fighters' varied combat proficiency leads to the question of how professional its army was. In several areas, IS showed considerable professionalism, understood as a standard of proficiency or organization that pervaded the group. The group developed training programs, had plenty of

experienced men to teach tactical skills, and possessed the time, space, and manpower to develop a disciplined force. For specialized skills like sniping and antiarmor operations, IS demonstrated quite consistent proficiency that reflected professional training. In footage of IS operations, fighters operating sniper rifles and antiarmor weapons like rocket-propelled grenades, self-propelled guns, and ATGMs demonstrated competence, skillfully handling their weapons, choosing targets, executing aimed shots, and firing from cover and concealed positions.[20] Thus, professionalism in combat skills varied widely among IS units, largely depending on unit function.

Consistent adherence to professional standards varied in different areas of the Islamic State's military organization. Both offensively and defensively, IS units down to the team or squad level reflected a degree of standardization in personal equipment carried into battle and composition. At least on paper, IS formations were organized by army (*jaish*), division (*firqa*), brigade (*liwa*), and battalion (*katiba*). At Mosul, IS units were distinguishable to the team level, each with three to five fighters armed with assault rifles, one machine gun, and one RPG.[21] Reflecting the group's emphasis on indoctrination, sharia advisors were embedded in units down to the platoon level.[22] Initially, IS counterattacks conformed to a standard procedure, involving one or two SVBIEDs and a platoon-sized follow-on force.[23] IS weapon and explosive production was remarkably standardized, with unique designs for various armaments and distinctive boxes and labels.[24] Training lasted a standard amount of time, and delegations from specialized "divisions," such as "air defense" or "sniper battalions," would begin visiting a new cohort after its first week of instruction to single out talented candidates for their units.[25]

In other areas, IS showed less standardization. This is clearest with fighters' apparel, which sometimes consisted of matching uniforms but mostly was a mix of civilian clothing, traditional garb, and captured military gear.[26] In an IS assault on Haditha Dam around January 2016, Maj. Gen. William F. Mullen reported encountering a company-sized group of IS fighters all wearing matching outfits resembling Marine Corps uniforms who had come as reinforcements from Syria. However, their uniforms did not correlate with proficiency since they approached in a tightly clustered formation and were quickly eliminated by U.S. rocketfire despite advancing under bad weather

that they attempted to use to evade air targeting.[27] Vehicles had the same lack of standardized camouflage and organization, with some IS advances involving camouflaged pickup trucks and others featuring a collection of different types of vehicles, probably depending on availability.

Overall, this evidence indicates that IS invested in professionalizing its more specialized military functions, like bomb making and sniping, and did not prioritize developing consistency in individual rifleman proficiency, which varied considerably. At the same time, indoctrination remained a potent aspect of IS training, preparing even the less skilled fighters for the type of aggressive operations IS favored. The relatively consistent proficiency of more specialized IS personnel, particularly snipers,[28] manifested most notably in IS defensive operations, with one U.S. officer present at Mosul describing how IS snipers would even target openings in Iraqi flak jackets.[29]

The Islamic State's Way of War and Military Effectiveness

The new low-tech IS conventional way of war sheds light on the four factors that account for its military effectiveness—namely, organizational innovation, shaping operations, will to fight, and seizing the initiative. The innovations in the group's ideology (apocalypticism), manpower (unprecedented upscaling and recruitment), and bomb-making capacity (industrialized IED production) allowed IS to operate conventional military forces on a far larger scale than its predecessors did. At the same time, facing better-equipped adversaries meant IS could not rely on firepower alone to achieve its goals. Instead, it developed an aggressive style that relied on highly determined fighters rapidly taking the initiative and subduing a less committed enemy. The need for a weak-willed adversary prompted IS shaping operations, including its tribal engagement and assassination campaigns.

The ensuing tactical style IS deployed was accordingly an improvement of its predecessors' styles. IS scaled up the tested AQI/ISI raids and ambushes and supplemented them with more numerous SVBIEDs. Instead

of terminating an operation hit-and-run style by disengaging, it would keep pressing forward. This small change of advancing where a terrorist or insurgent would typically break off was a simple change exemplifying the conventionalization of its predecessors' tactics. Still, pressing an attack against a materially superior foe required fighters willing to advance under potentially heavy fire with the belief that closing in on enemies would cause them to flee. Yet IS went even further, inculcating in its fighters a veneration of martyrdom in the pursuit of victory or shameful death in fleeing (which IS often punished with execution).[30] IS believed that a determined wall of fighters eager to make the ultimate sacrifice would break the spirit of its well-armed enemies.

Likewise, keeping the initiative was essential for maximizing the pressure on the Islamic State's foes. If the purpose of a typical IS strike was to break its target's will, then an aggressive pace of operations was the preferred fighting style. Surprise and shock, most strongly inflicted through its SVBIED strikes, were meant to quickly demoralize an enemy and force a rout. Likewise, as long as IS kept the initiative, it could choose the battlefield and attack the enemy at the points where it did the most preparatory shaping, as it did in the advances on Mosul and Raqqa. Hence, the four elements of the group's effectiveness mutually supported one another, with an unprecedentedly large, organized jihadist force of determined fighters constantly looking to shape and strike at its enemies' most vulnerable points.

This style resulted in IS fielding highly motivated and mobile fighters with mixed combat skills that enabled them to defeat less determined adversaries. Those enemies that might have had the determination to hold the line were demoralized and weakened by IS with extensive shaping operations, including tribal engagement in Anbar, Libya, Sinai, and Syria; cooptation of other groups like Jabhat al-Nusra, Katibat al-Battar al-Libiyah, and Jaish al-Muhajireen wal-Ansar; and terrorist and assassination campaigns against the Iraqi security forces. To further punctuate the shock effect of a coming offensive, IS embedded its operatives behind enemy lines, including at Mosul, Raqqa, Darnah, Sirte, Ramadi, and Marawi. Defenders at these places collapsed with little fighting, sometimes with mass defections. To some extent, the Islamic State's mobility and flexibility worked against the

traditional weaknesses of the Iraqi and Syrian armies—namely, a disinclination to show initiative that often left them paralyzed in the face of aggressive IS probing and patrolling.[31]

IS struggled against more motivated adversaries that it could not significantly degrade before engaging in battle, such as the Iraqi Counter Terrorism Service, Egyptian military, Iraqi and Syrian Kurdish armed groups, and local Darnah jihadists. The heroic determination of the People's Defense Units, or YPG, at Kobane or CTS at Bayji forced IS into prolonged fighting in which it proved less successful as a result of the mixed tactical proficiency of its fighters, its inability to engage the enemy on its own terms by holding the initiative, and exposure to air attack. According to IS-released footage of its military operations, it was common to see fighters using cover well and carefully aiming their guns fighting alongside men firing aimlessly and not making use of their sights, exposing themselves, and giving away their positions by yelling (mostly *Allahu akbar*, or "God is greater") at their opponents.[32] In contrast, IS adversaries were often well trained and experienced soldiers who fought well when they chose to hold their ground. The case was true even in early 2015 at Ramadi, which IS eventually did take, but only after a difficult sixteen months fighting against the CTS. Here, the jihadists overcame their opponents very gradually by taking surrounding areas and strangling their logistics.

Defensive operations, in turn, forced IS to fight on much less favorable terms. The potential morale decline of shock attacks with car bombs was reduced because IS could no longer count on achieving surprise, nor could it choose the battlefield or its adversary. By definition, when on the defensive, IS could not hold the initiative. When determined attackers, such as the Syrian Democratic Forces or the CTS, struck IS, and especially when bolstered by coalition support, enemies of IS often enjoyed a higher concentration of forces and firepower that the jihadist group almost never could defeat. Indeed, when on the defensive, IS had few tools to break its adversaries' will if the latter demonstrated they would pay the price for victory, especially because IS could not seriously rely on the quality of its fighters to outdo its enemies.

Notes

1 Abdullah al-Janabi is an example. See Bill Roggio, "Abdullah al Janabi Openly Preaches in Fallujah Mosque," *Long War Journal*, January 18, 2014, https://www.longwarjournal.org/archives/2014/01/abdullah_al_janabi_openly_prea.php.

2 Author email conversation with Aaron Zelin, February 2021.

3 Andrea Beccaro, "Modern Irregular Warfare: The ISIS Case Study," *Small Wars & Insurgencies* 29, no. 2 (2018): 207–28, https://doi.org/10.1080/09592318.2018.1433469; and Scott Jasper and Scott Moreland, "The Islamic State Is a Hybrid Threat: Why Does That Matter?" *Small Wars Journal*, December 2, 2014, https://smallwarsjournal.com/jrnl/art/the-islamic-state-is-a-hybrid-threat-why-does-that-matter.

4 Frank G. Hoffman, *Conflict in the 21st Century: The Rise of Hybrid Wars* (Arlington, VA: Potomac Institute for Policy Studies, December 2007), 14, https://www.potomacinstitute.org/images/stories/publications/potomac_hybridwar_0108.pdf.

5 Ibid., 35–43.

6 Beccaro, "Modern Irregular Warfare," 210–17, https://doi.org/10.1080/09592318.2018.1433469.

7 Omar Ashour, *How ISIS Fights: Military Tactics in Iraq, Syria, Libya, and Egypt* (Edinburgh: Edinburgh University Press, 2021), 21.

8 The Lebanese Shia jihadist group Hezbollah did some conventionalizing on a smaller scale with its network of defensive fortifications and ambushes in the 2006 war with Israel, but this did not include suicide bombing.

9 Author interview with Dr. Gil-Ad Ariely, chief knowledge officer and senior researcher, International Institute for Counter-Terrorism, Interdisciplinary Center, Herzliya, Israel, November 2020.

10 In a video from February 2018, IS features ATGM attacks on buildings, parked vehicles, and fortified positions from a distance to hit unsuspecting enemies. See https://jihadology.net/2018/02/22/new-video-message-from-the-islamic-state-the-glory-of-jihad-2-wilayat-al-barakah/.

11 See, e.g., an IS video from July 2014 in Ramadi documenting the use of an Iraqi Humvee as an SVBIED against a "barracks,"

https://jihadology.net/2014/07/28/al-furqan-media-presents-a-new-video-message-from-the-islamic-state-upon-the-prophetic-methodology/.

12 Seán D. Naylor, "The Islamic State's Best Weapon Was Born in the USA," *Foreign Policy*, June 4, 2015, https://foreignpolicy.com/2015/06/04/hell-on-wheels/.

13 Author interview with Ariely, November 2020.

14 Joseph L. Bower and Clayton M. Christensen, "Disruptive Technologies: Catching the Wave," *Harvard Business Review*, January 1, 1995, https://hbr.org/1995/01/disruptive-technologies-catching-the-wave; and Clayton M. Christensen and Michael E. Raynor, *The Innovator's Solution: Creating and Sustaining Successful Growth* (Boston: Harvard Business Press, 2003), 32–33.

15 Author interview with Lt. Gen. Michael K. Nagata, February 2021.

16 This book's analysis of IS doctrine is based on actual IS operations, in the absence of documents produced by IS outlining its doctrine.

17 Gabi Siboni, "The Military Power of the Islamic State," in *The Islamic State: How Viable Is It?*, ed. Yoram Schweitzer and Omer Einav (Tel Aviv: Institute for National Security Studies, 2016), 65, https://www.inss.org.il/publication/military-power-islamic-state/.

18 Ibid., 69.

19 Aymenn Jawad Al-Tamimi, "Islamic State Training Camps and Military Divisions," June 24, 2015, http://www.aymennjawad.org/2015/06/islamic-state-training-camps-and-military.

20 Based on author's review of IS-produced videos showing the group's fighters in battle in 2013–19. Videos retrieved from https://jihadology.net/.

21 Author interview with U.S. Special Operations Forces officer, January 2021.

22 Elallame et al., "The Islamic State's Department of Soldiers," 6, https://isisfiles.gwu.edu/concern/reports/c247ds10z?locale=en.

23 Starting in 2018, the infantry component of counterattacks became considerably larger, usually involving a company of fighters.

24 "Standardisation and Quality Control in Islamic State's Military Production" (Conflict Armament Research, December 2016), https://www.conflictarm.com/dispatches/standardisation-and-quality-control-in-islamic-states-military-production/.

25 Tamimi, "Islamic State Camps and Divisions," http://www.aymennjawad.org/2015/06/islamic-state-training-camps-and-military.

26 Based on author's review of IS-produced videos showing the group's fighters in battle in 2013–19. Videos retrieved from https://jihadology.net/.

27 Author interview with Maj. Gen. William F. Mullen, February 2021.

28 Russian-speaking IS fighters were associated with the group's sniper teams, indicating that the foreign fighter cadre boosted the proficiency of IS sniping.

29 Author interview with U.S. military officer, February 2021.

30 For example, Ben Tufft, "Isis 'Executes up to 200 Fighters' for Trying to Flee Jihad and Return Home," *Independent*, December 30, 2014, https://www.independent.co.uk/news/world/middle-east/isis-executes-least-120-fighters-trying-flee-and-go-home-9947805.html.

31 For more on the weaknesses of Arab militaries, see Kenneth M. Pollack, *Armies of Sand: The Past, Present, and Future of Arab Military Effectiveness* (New York: Oxford University Press, 2019).

32 Based on author's review of IS-produced videos showing the group's fighters in battle in 2013–19. This mixing of skilled and less skilled fighters is particularly striking because videos from IS in Afghanistan or the Philippines consistently show skilled fighters using sound combat skills like good marksmanship and maneuver under cover. Videos retrieved from https://jihadology.net/.

7

Lessons Learned and Policy Implications

The Islamic State integrated its tactical style with high fighting power and innovation to adapt to changing battlefield conditions in Syria, Iraq, and elsewhere. To degrade IS and other jihadist groups in the future, the United States and its partners must adapt in kind.

Major IS Vulnerabilities

The war against the Islamic State revealed a number of the group's vulnerabilities and how to exploit them in future conventionalized fights against it and other jihadist groups. First, in line with the experiences of its predecessors, IS could never develop any real air defense capability against fixed-wing aircraft, resulting in a high vulnerability to airpower. This vulnerability was not for lack of trying: Brig. Gen. Matthew C. Isler described a rudimentary "layered air defense" system IS developed in which it would assign fighters to spot and relay locations of aircraft to antiaircraft teams armed with heat-seeking missiles and technical-mounted air defense autocannons hidden under buildings and awnings. These teams would then appear, quickly fire their weapons, and retreat to their concealed positions to evade retaliatory

air attack.[1] Accordingly, IS air defense presented some threat to helicopters and other low-flying or slow-moving aircraft, sometimes forcing them into higher altitudes, but it mostly did not deny airspace access to coalition warplanes, let alone dispute their air superiority. Airstrikes posed a constant hindrance to the Islamic State's use of suicide vehicle–borne improvised explosive devices, massed forces, and heavy weapons, in some instances rendering IS forces immobile, ineffective, and stripped of their most advanced assets like tanks and towed artillery. Therefore, an essential aspect of any preparation for the next conventionalized jihadist military campaign should be establishing robust air support, including advanced aircraft working closely with ground forces, and indigenous air attack capabilities for partner forces. This effort may include development of a drone fleet as an interim substitute for more advanced airpower.

Second, largely because of its vulnerability to airpower, IS performed relatively poorly when it massed its forces. This problem was most evident at Kobane, where coalition airpower shredded the jihadist group's division-sized force massed against defined frontlines. But other jihadist groups and *wilayat* have had the same issues. For example, al-Qaeda in the Islamic Maghreb's 2012 advance on southern Mali and the pre-2016 style of Boko Haram and IS West Africa province led to heavy losses and disaster. At the same time, IS often performed well when it leveraged its small-unit style to effectively cope with airstrikes. Advancing in small groups in low-visibility weather, through tunnel and mousehole networks, or with civilian human shields enabled IS to operate under conditions of enemy air superiority. Nonetheless, these types of moves significantly limited the group's ability to defeat higher concentrations of adversary forces, as in almost all the group's defensive operations. Thus, as long as IS lacks proper air defense, its massed forces will remain highly vulnerable, another reason the United States should continue ensuring that its partners have adequate access to airpower, preferably through support but, failing that, through improvised indigenous capabilities like small drone fleets akin to those IS itself deployed.

Third, IS generally could not achieve victory in protracted engagements, with the 2014–15 battle of Ramadi the major exception. Longer offensives, such as at Aleppo, Deir al-Zour, Bayji, and Kobane, depleted its signature

shock effects, which it relied on to break its adversaries' willpower. Prolonged engagements, thus, saw IS contend with better-armed adversaries in tests of strength rather than willpower, forcing the group into fights that were not conducive to its way of war.[2] At Kobane, for example, the People's Defense Units, or YPG, held off IS long enough for coalition airpower to cripple advancing IS forces.

This point reinforces the importance of airpower in destroying IS formations once they are engaged. Furthermore, it underlines the group's difficulties in effectively sustaining a conventionalized fight over time, once it can no longer rely on breaking an adversary's willpower. Smaller numbers, inferior equipment, uneven levels of tactical proficiency, and exposure to air attack took their toll. Ramadi was an exception because of the limited air campaign, less defined frontlines, and increasingly strained Iraqi security forces logistics. Hence, ensuring that partner forces continue to have material advantages, including better equipment and airpower, and helping them become determined enough to withstand jihadist shock attacks can turn engagements into battles of attrition not conducive to the Islamic State's way of war.

Leadership decapitation has had limited success in reducing Islamic State fighting capacity, with the important exception of the battle for west Mosul.[3] Security studies scholar Jenna Jordan credits the level of bureaucratic organization and strong ideology of IS with promoting command hierarchies and a common purpose transcending any particular leaders.[4] As discussed earlier, this organization endured through the battle of Baghuz, where hardened IS cadres continued to lead fighters into battle and bomb-making workshops supported the war effort. In addition, there never seemed to be a shortage of midlevel leadership in small-unit operations throughout the Hajin campaign and other defensive operations. Neither did casualties among IS commanders seriously affect morale, as IS members kept fighting, often to the death, even after sustaining heavy casualties such as at Kobane or Mosul. The elimination of a high portion of IS tactical leaders during the west Mosul campaign stands out as an exception in which captured fighters did report being disoriented by the loss of their commanders. Such an outcome might be expected, with the jihadists surrounded, outnumbered,

and confined to a small battlespace in their last stand in Iraq, and yet IS fighters, even if disoriented, by and large continued fighting to the death and mostly refusing to surrender while under these particularly challenging circumstances. Thus, IS has developed a strong organization and an ideology that together have minimized the effect of leadership decapitation on its military operations.

The Mixed Effects of Nonkinetic Anti-IS Efforts

Outside the purely military sphere, three efforts to diminish IS capabilities have received much attention: foreign fighter interdiction, counter-finance activities, and information warfare operations.

Diminishing Returns on Foreign Fighter Interdiction

A large portion of IS manpower, including many of its best fighters, was neither Iraqi nor Syrian. The capture by Syrian Democratic Forces of the northern Syrian town of Manbij near the Turkish border in August 2016 helped curtail important smuggling routes and foreign fighter "ratlines," or commonly used paths, via Turkey,[5] and by the end of 2018, U.S. defense officials estimated the foreign fighter flow to IS decreased to fifty per month from the tens of thousands IS received overall in 2014–16.[6] Greater awareness of the issue among law enforcement bodies, particularly in Western countries, has prompted countermeasures to stop people from traveling abroad to join IS or other groups.[7] IS territorial losses probably also discouraged people excited by its successes from attempting to join the group. The group responded by increasingly encouraging terrorist attacks in "crusader" (i.e., Western) countries, possibly signaling to foreign supporters that they should not attempt to travel to the caliphate.[8]

This decline in new foreigners certainly affected IS recruitment capacity and long-term viability, but it likely did not impair the group's immediate military effectiveness. Surviving skilled foreign fighters appeared up until the last IS defensive operations. During the Hajin campaign, experienced

foreign fighters often led conscripted locals, who served as cannon fodder in place of the less tactically proficient foreigners who may have filled the same role in previous operations. The knowledge and skills some foreign fighters brought were preserved in surviving fighters and to an extent in training manuals and other documents, as well as via exchange with the *wilayat* outside Iraq and Syria, particularly IS in Libya and ISWA. Hence, it remains important to take preventive measures against a potential new foreign fighter movement, which could considerably increase the threat of a renewed conventionalized jihadist campaign, but real-time interdiction will have diminishing returns.[9]

The Limited Impact of Counter-Finance Efforts

Coalition counter-finance operations had similarly minor effects on IS combat performance. Highly publicized airstrikes on IS-controlled oil fields[10] and "banks," or cash storage points,[11] no doubt complicated IS financing efforts; oil was the caliphate's largest source of revenue.[12] IS documents retrieved by Aymenn Al-Tamimi from late 2015 recounted cuts in electricity, as well as salaries and benefits for IS fighters and administrators, because of "exceptional circumstances," though salary cuts may have been localized since IS payment rates to its members varied in different areas according to their circumstances.[13] Lt. Gen. Sean MacFarland stated that coalition "deep strikes" on IS financial targets were partially aimed at reducing the economic incentives for people to join the group.[14] Also, the documents suggest that as IS frontlines stagnated and began to be rolled back, the group started to experience personnel difficulties, including some fighters attempting to obtain false medical reports to avoid frontline duty.[15] Although it is unclear whether such circumstances were the result of counter-finance operations or the broader territorial losses IS was increasingly experiencing, these operations most likely played a role.

These counter-finance operations significantly affected IS governance and administration but appear to have had limited influence on military effectiveness. The group often responded to money and fuel shortages by rationing and redirecting resources to military upkeep, including bases and

vehicles.[16] Salaries for fighters make up one of the Islamic State's largest expenses, and there is evidence from IS defectors that some were receiving half or even no pay for extended periods.[17] Nonetheless, this money problem did not stop IS from continuing to mount large military operations with thousands of fighters. The battle of Mosul is a case in point. General Isler recalled, "I never understood that money was the limiting factor to objectives…Bank strikes limited cash in future, but I understood they always had enough cash for today."[18] In August 2016, after losing the strategic oil-rich town of al-Qayyara, eighty kilometers from Mosul, the group immediately centralized all oil distribution inside Mosul under IS tankers (rather than permitting non-IS ones to operate as it did before) to ensure its military assets would be adequately supplied. This move put a strain on Mosul civilian life, but throughout the ensuing battle, IS fighters did not seem to lack supplies.[19] Thus, counter-finance operations complicated IS governance efforts and forced it to redirect limited resources to military endeavors, but financial losses did not make the difference between victory and defeat on the battlefield.

Anti-IS Cyberwarfare: A Late Arrival with Great Potential

Given the Islamic State's proficiency in propaganda and psychological operations, information warfare was an important line of effort for the United States and the coalition. The most effective activities were coalition cyber operations. Although much information on these operations remains classified at the time of this writing, there are indicators that anti-IS cyber operations were successful and hold important lessons learned. Moreover, the United States and its coalition partners had little experience with large-scale cyber operations, and it took at least until late 2016 to secure necessary legal authorities and coordination with other combat arms and partners on the ground to enable effective cyber operations.[20] That is, these operations, while achieving appreciable gains, began to affect the battlefield only when IS was already strategically on the defensive—likely during the battles of Mosul and Raqqa.

Nonetheless, cyber operations generated significant effects that likely facilitated (though did not decide) victory. In 2018, U.S. Army Gen. Stephen Townsend recalled an operation that he commanded in which cyber and space assets were used to disrupt systems in identified IS command posts, forcing the personnel manning them to go to alternate posts. This action allowed the coalition to find both the primary and alternate posts and strike them all with military assets.[21] In 2019, the director of the Australian Signals Directorate, Mike Burgess, described a coalition operation in which hackers working from Australia disabled IS communications systems as partner forces assaulted an IS position, preventing the attacked fighters from connecting to the internet or speaking with each other in battle.[22] Last year, Col. Brian Russell, the former director of plans and strategy for Joint Task Force–Ares, which handled U.S. cyber operations against IS, claimed that American hackers would find and "disclose" IS capabilities and vulnerabilities publicly. As Colonel Russell said, "Disclosure forces the adversary to ask: 'How were those capabilities discovered?' It causes them to investigate the cause of the disclosure, forcing them to spend time on something other than attacking us."[23] The most prominent example was Operation Glowing Symphony in 2016, which involved dozens of personnel from U.S. Cyber Command and the National Security Agency hacking and shutting down key IS internet accounts operating the group's media activities.[24]

These cyber operations were pioneering in the context of U.S. cyberwarfare and achieved important gains, even if they came too late to have major effects on the war. The challenge for the United States and its allies and partners now is to learn how to streamline and better integrate cyber operations among services and partner forces. As General Townsend said, instead of taking long periods to plan relatively short operations, "We're going to have to generate sophisticated, multidomain operations in minutes and hours, and those operations will have to last days and weeks."[25] Streamlining and synchronizing various legal authorities with other services and coalition allies while improving interservice, coalition, and partner force coordination will help make cyber operations more effective for future operations.

The Insignificant Impact of Coalition Psyops

Psychological operations, or psyops, another aspect of information warfare—encompassing attempts to influence hostile forces' mindset and counter IS propaganda—had a lesser effect on the Islamic State's fighting power. U.S. forces airdropped leaflets, broadcast radio messages, and blasted vehicle-mounted acoustic hailing devices to try to demoralize, unsettle, and confuse IS fighters.[26] For example, one audio message approved to be blared out at IS fighters stated, "Do you regret choosing this life with Daesh [another name for the Islamic State]? You probably miss your family at home."[27] Leaflets depicted IS members as gruesome killers in an attempt to prompt defections and discourage people from joining the group.[28]

There is little evidence that these efforts succeeded in significantly demoralizing IS members. Indeed, IS fighters were consistently motivated, even fanatical, and rarely were involved in disorganized retreats and surrenders on a large scale. In the limited instances these did occur, as at Baghuz, it is difficult to ascribe them to coalition psyops. In fact, a U.S. Special Operations Forces officer involved in the Hajin campaign said that IS indoctrination and coercive measures largely discredited any messages U.S. forces tried to convey, and only one IS member surrendered carrying a leaflet.[29]

This last point underscores an important dynamic that pervaded the war: IS psyops always surpassed U.S. efforts in that domain. One might trace this dynamic to late 2013, when the U.S. State Department launched its counterproductive "Think Again, Turn Away" social media counter-narrative campaign, in which it disseminated videos highlighting IS atrocities and brutality.[30] Compounded by cringeworthy U.S. government official Twitter exchanges with IS supporters, the initiative ultimately amplified the reach of IS content and made the United States look soft. Throughout the war, IS leveraged social media to demoralize its enemies, galvanize its supporters, and cast its enemies in a bad light. The group's use of civilians as human shields and mosques, schools, hospitals, and other major civilian buildings for command centers and other military functions produced eye-catching international media headlines and photographs when airstrikes blew up

mosques and other civilian buildings. Whereas IS almost never failed to deceptively exploit these scenes as ostensible proof of coalition disregard for civilian life, the coalition and partner forces were often slow to respond. In this way, IS maintained its appeal while tarnishing the coalition's image.

U.S. SOF officers commonly noted the coalition's inability to respond to deceptive messaging as a constant hindrance.[31] One officer recounted that during the Hajin campaign, whenever IS garrisoned a mosque, thus necessitating a strike on it, there would be much "hand-wringing" in anticipation of public backlash because the coalition had an inefficient, untimely response mechanism. "America is so slow to respond, the truth doesn't matter by the time it comes out…once they [IS] say it, it sticks and they'll say it a hundred times," the officer noted.[32] U.S. SOF psyops specialists attempted to develop a workaround to this issue by coordinating with the SDF to deliver swifter counter-messaging on SDF-run social media, which unlike U.S. psyops is not subject to regulation and oversight, but this activity served mostly to reassure the SDF's own support base rather than prevent broader negative reaction by the public.[33] In another well-publicized incident in Mosul on March 17, 2017, a coalition warplane bombed an IS sniping position on the roof of a building, which then exploded ostensibly from the released munition, killing 105 civilians IS had brought inside. It was not until one week later that the Pentagon revealed the airstrike had inadvertently triggered a cache of explosives planted covertly by IS beforehand four times more powerful than the munition dropped on the roof, but this revelation came too late to make a difference.[34]

Quicker, evidenced responses to IS disinformation will help blunt jihadist information warfare in the future, such as in this example: On June 21, 2017, IS blew up the Great al-Nuri Mosque and blamed it on a coalition airstrike. However, the Iraqi military almost immediately responded that IS, in fact, did it, releasing a video showing the detonation of planted explosives on the mosque.[35] This kind of responsiveness will help expose the jihadists as deceptive and reinforce the good image of the United States and its partners and allies as consciously avoiding civilian casualties and adhering to the laws of armed conflict. The United States should, therefore, invest in streamlining its responsiveness to hamper jihadist information warfare in the future.

Fighting Jihadists "By, With, and Through" Partner Forces

The fight against IS holds lessons for U.S. "by, with, and through" partnerships. U.S. Central Command defines these operations as "led *by* our partners, state or nonstate, *with* enabling support from the United States or U.S.-led coalitions, and *through* U.S. authorities and partner agreements."[36] According to this model, the United States achieves outsize gains toward its interests by supporting allies and partners, whose forces do the hard fighting on the ground against shared adversaries. The United States provides training, equipment, fire support, airpower, and other support to enable partner force effectiveness and make unnecessary a significant ground commitment.

In the war against IS, the United States engaged in two major "by, with, and through" partnerships: one with the YPG/SDF and the other with the Iraqi security forces, the Counter Terrorism Service in particular. The U.S.-YPG partnership began at the battle of Kobane, in which American airpower enabled the Kurds to push IS out of the town and then roll back the group's territories in northern and eastern Syria. The relationship led to the creation of the SDF, with increasing U.S. support in training and operations, including airpower and limited ground accompaniment.[37] The United States had been working with the ISF since 2004, when it disbanded the Iraqi military following the 2003 invasion and invested heavily in building a new one from scratch.[38] The CTS was the greatest beneficiary of this cooperation, working closely and developing strong relations with U.S. Special Forces through constant joint training and operations.[39] Throughout the war with IS, the ISF enjoyed increased U.S. support to stop the advance of the Islamic State and deprive it of its territory.

Examining IS as a military force holds important lessons for how best to conduct "by, with, and through" operations. In areas where IS surpassed its adversaries, the United States and coalition members can learn from IS how to more effectively work with partners. In particular, IS outdid its enemies in the following:

- Innovation
- Determination

- Mass
- Talent identification
- Maintaining contact with local populations

Therefore, the coalition needed to massively help its partners compensate, especially by providing them with air and fire support. The following section assesses each area of IS overmatch, the role of coalition air and fire support, and the corresponding lessons for "by, with, and through" operations.

The Innovation Gap Between IS and Its Adversaries

Throughout the war, IS proved adept at innovation and adaptability, especially in low-tech areas. Some examples of notable IS adaptations are the evolving of VBIED up-armoring, the changing of efforts to evade airpower, and the adapting of commercial quadcopters as mini bombers. Many of these were so potent that U.S. and other forces struggled to counter them, and even adopted some of them, such as the U.S. introduction of small drones.[40] At Kobane, the YPG fielded an up-armored fighting vehicle with the same features as an IS VBIED.[41] In March 2021, another anti-IS group—comprising elements of the Popular Mobilization Forces—appeared with IS-style rocket launchers mounted under the beds of trucks for concealment.[42] This extraordinary level of innovation—to the point where the militarily advanced United States as well as rival militias like the YPG and PMF adopt IS tactics—begs the question of how and whether to emulate IS adaptations.

IS developed a culture of innovation through a number of factors. One is the jihadist legacy IS embodied, which, as mentioned in chapter 1, has always shown innovative tendencies.[43] Over decades, the constant need to solve complex problems when fighting far more sophisticated adversaries, from the Soviets to the Americans, prompted jihadist groups to come up with innovative solutions. For example, using inconspicuous devices as weapons—whether airplanes as suicide bombs (9/11 attacks) or trucks as heavy bombs (SVBIEDs)—developed out of the need to counter more advanced adversary defenses.[44]

Jihadist leaders, within IS particularly, showed great willingness to learn from trial and error. As leadership consultant Timothy R. Clark notes, "rewarded vulnerability," or an effort by organizational leaders to reward attempts at innovation—even if they result in failure—is essential to fostering innovation.[45] As counterterrorism scholar Assaf Moghadam shows, Osama bin Laden planned the 9/11 attacks based on lessons from failed terrorist airplane bombing plots going back to at least 1993.[46] This mode of change appeared repeatedly in the use of VBIEDs. For example, at the battle of Mosul, IS constantly changed the way it deployed its car bombs to cope with ISF countermeasures. On one day during the October 2016 battle for the outskirts, the group lost most of fifteen up-armored truck bombs it unleashed against the ISF to enemy tanks, later improving SVBIED survivability by hiding them in garages behind enemy lines, guiding them to their objective with drones or accompanying fighters, and targeting infantry clusters during urban combat (in which the ISF did not have as many antiarmor assets).

Ideological drivers were another important factor of jihadist innovation. Most notably, jihadists' veneration of martyrdom led to widespread adoption and development of the suicide bomb. The Islamic State's apocalyptic flavor of jihadism posed the highly complex and immediate problem of conquering a vast territory in a short time with a force that had never been able to hold more than several cities. This problem brought about substantial growth in IS shaping capabilities, including tribal engagement and contacts with Syrian rebel groups, as well as its proficiency in conventional warfare.

A related factor was the Islamic State's willingness to sustain casualties.[47] The consistently high will to fight of IS members, large frontal assaults as at Kobane or Tabqa Air Base, and mass use of suicide tactics were the most prominent examples of IS fighters' eagerness for death on the battlefield. A desire for death on the battlefield is consistent with IS ideological enshrinement of martyrdom and apocalypticism. Such casualty tolerance, combined with the enormous manpower and willingness to conscript locals, facilitated IS experimentation with dangerous, human-capital-intensive activities, such as producing new types of IEDs, developing ever-deadlier SVBIEDs and suicide tactics, creating chemical weapons, and adopting new unit functions, like shock-troop or siege-breaker teams.[48] Some of these efforts,

like the IS deployment of chemical weapons at Mosul in 2016–17 and siege breakers to attack the ISF at Mosul, ended in failure, but others, such as the up-armoring of VBIEDs, were great successes.[49]

In contrast, the ISF and SDF did not demonstrate as much innovation. On the strategic-ideological level, neither of these forces seriously sought conventional offensive capabilities, because of their attachment to insurgent/counterinsurgent styles of fighting. Both forces operated in defined geographical areas and did not aspire to expand into or otherwise conventionally challenge neighbors outside of those areas. The YPG, with its roots in the terrorist-insurgent Kurdistan Workers Party, or PKK, had only begun to gain serious experience in taking and holding territory openly in the Syrian civil war. The ISF was mostly concerned with counterterrorism (hence the name of its best unit, the Counter Terrorism Service) while the most significant urban battles against al-Qaeda in Iraq and the Islamic State of Iraq, including Fallujah, Ramadi, al-Qaim, and Baquba, were led mainly by U.S. ground forces. Therefore, it was quite common for U.S. officers to remark on how unprepared the ISF and YPG were to confront IS initially and the great difficulty those forces had in adapting to fighting more conventionally.[50] As security studies scholar Ahmed Hashim said of the Peshmerga and Iraqi military, "Neither the army nor the Kurds had any tactics, techniques, and procedures to counter the revised and improved jihadist way of warfare."[51]

Coalition support significantly assisted them in compensating for this adaptation gap. This help was often as simple as providing the support that partner forces felt they needed to advance—most often in the form of air support and artillery fire. U.S. advisors present at the battle of Mosul recalled how difficult it was to convince Iraqi forces to advance. One remarked on the ISF, "They would attack, take casualties, and instead of holding the ground, they would come back…We convinced them, 'You gotta keep going, once you get an opportunity, you gotta take that opportunity and go after it,' and once they saw that was successful, that's when we started to advance in Mosul, but it took a long time."[52] At Kobane as well, the YPG generally did not advance until airstrikes flattened an opposing block on the frontline.

Other times, coalition personnel would facilitate more complex

adaptations. At the 2015–16 battle to retake Ramadi, for instance, U.S. SOF officers gave the ISF training in combined arms breaching operations to help overcome the concentric IED minefields around the city. This training was in response to the ISF initially sending in a small number of unsupported explosive ordnance disposal (EOD) teams or running armored bulldozers through the minefields as clearing methods. Prepared IS defenders easily countered those efforts until the ISF, after training from the coalition, deployed EOD units with adequate suppressive fire.[53] Likewise, at Baghuz, a U.S. SOF team spearheaded the final sniper campaign that precipitated the Islamic State's defeat in that battle.

This kind of support was undoubtedly a game changer, but those operations were mostly external to the partner forces. What was hardest and most important for future operations was providing an operational framework for partner forces to make their own adaptations. This area remains one in which IS will likely retain an overmatch because of its higher acceptance of risk and willingness to experiment with new tactics. Nonetheless, U.S. forces can work with partners to provide risk-mitigating support and advice that could encourage innovation among partners. Providing technologies to help counter the most formidable threats from IS, particularly SVBIEDs and drones, is one way to do this, as discussed toward the end of this chapter.

The Role of Airpower and Fire Support

In the absence of matching innovation and will to fight among U.S. partners, the key to defeating IS became the coalition's extensive air and fire support. Firepower blunted the Islamic State's most powerful weapons (SVBIEDs), constantly forced IS to give up the initiative and find ways to evade airstrikes, and presented IS with the dilemma conventionalized jihadist operations have never been able to solve: how to operate under conditions of enemy air supremacy. In almost all the battles examined in this study in which the coalition committed significant air and fire support, IS could not win. The only exception was Ramadi in 2014–15. In those victories, the advantage that coalition airpower and fire support conferred was truly decisive, and

it is hard to imagine how the ISF or SDF, having been initially decimated by IS, would have been able to carry on the war without that support.

Besides reducing IS fighting power, the coalition air campaign gave a decisive boost to the resolve of the partner forces. As General MacFarland said of the ISF, "They were kind of McClellan-esque[54] in their desire for massively overwhelming forces before they would move forward, and even then, as soon as they encountered resistance, they would all hunker down and want to just obliterate whatever was in front of them with an airstrike before they would even consider moving again."[55] U.S. SOF officers who worked with the SDF expressed similar sentiments, particularly about areas outside core Kurdish territories like Raqqa and Hajin, for which the predominantly Kurdish leadership of the SDF was unwilling to incur major casualties to liberate.[56]

This is not to discount the vital role of ISF and SDF ground forces, whose synergy with the coalition improved the quality of air support. As the coalition increasingly accepted targeting assistance from the partner forces, the quality of air support improved considerably, from Kobane onward. The growing number of ground controllers and observers (drawn from both partner forces and coalition personnel), as well as flexibility in devolving munitions release authorities to partner forces at certain times, greatly facilitated targeting for air and artillery strikes. In this way, the coalition and partner forces became interdependent in the war against IS.

However, as U.S. and coalition forces now scale down their presence in the region, they should remember how vulnerable to IS the YPG and ISF were in 2014. Indeed, the SDF's failed initial attempt to assault Baghuz without coalition support as late as 2018 should serve as a reminder and an indication of the partner forces' enduring dependence on the coalition. Thus, the lesson to be drawn from the coalition air campaign should be not only that it was a crucial enabler of success, but also that its absence would have been detrimental, if not fatal, to the local partner forces. The United States should assist its partners in mitigating this risk by helping them build drone fleets to serve as a substitute—albeit a less powerful one—for coalition airpower.

At the same time, the coalition air campaign reveals that the fact of airpower alone is not sufficient for enabling partner force success. The ISF had

its own air force that ultimately could do little to oppose the IS onslaught. The Syrian air force also had a mixed record, sometimes helping repel IS forces, but in crucial instances failing to do so, as at Menagh and Tabqa Air Bases. Even coalition airstrikes could not significantly affect the battles in Anbar in 2014–15 until coalition strike capabilities expanded and targeting improved. The obvious conclusion for future conflicts is that the Islamic State and similar disruptive-innovative ground forces (e.g., the Taliban in its recent retaking of Afghanistan after the withdrawal of U.S. forces) may achieve significantly greater military gains unless they are faced with effective air forces. Helping U.S. partners develop approximate capabilities, such as by integrating drones or unmanned ground vehicles into their units, will be important in future operations.

Fostering Determination

The high will to fight of IS members is the most consistent feature of the group's military operations. Surrenders of fighters were relatively rare and occurred en masse only at Baghuz, when there was no more territory left for IS to withdraw to; in that case, there may even have been an intention to seed detention centers or refugee camps with a surviving cadre of fighters. In some instances, IS fighters demonstrated foolhardy determination, repeatedly attacking positions that had robust air coverage or attempting to cross defiles or rivers where firepower obliterated one group after another. Other times, this fanatical will to fight served the group well, as at Tabqa, where IS sustained considerable casualties advancing against heavily armed Syrian positions but ultimately took the air base when Syrian soldiers broke and ran.

IS sources of determination varied from battle to battle, though ideology was consistently important. The group's emphasis on indoctrination fed into the commitment to the cause. Commitment not only kept IS members fighting but also produced cadres of its most determined fighters who kept wavering comrades in line and imposed harsh (often capital) punishments on those who attempted to flee or surrender. In addition, at different times, IS relied on coercion, conscripting locals and threatening their families if

they refused to fight. These tactics occurred increasingly during the Hajin campaign, and handcuffed remains of SVBIED drivers indicate the group forced people to execute suicide bombings, too. Captagon, as discussed in chapter 2, as well as money and sex slaves also appeared as motivators throughout the war.

This coercion presented a difficult challenge for less determined opponents of the Islamic State. Severely demoralized forces, such as most of the ISF, collapsed against the jihadist onslaught with little fighting. Kurdish groups did not fight hard at first for areas that were not part of their core home regions. Stalwart stands made by the CTS at Bayji and Ramadi, the Egyptian military at Sheikh Zuwaid, or YPG at Kobane gave IS a run for its money as the group needed to rely more on operational maneuver and tactical proficiency rather than its strong determination. Hence, it was crucial for anti-IS forces to maintain a high level of determination to match that of IS or risk being quickly overrun.

Fostering determination for a partner force is a challenge, but the war against IS offers some lessons for how the United States and other coalition members can do it. Providing air and logistics support was sometimes an easy fix for motivating less confident formations to advance, and threatening to take it away from a stubbornly immobile unit was just as effective. In other cases, a coalition general could request that the Iraqi prime minister give a direct order to the ISF to urge them forward or replace an Iraqi general unwilling to advance.[57]

Building deeper commitment is a greater challenge that requires long-term efforts. The CTS is exemplary as a unit that has been training and operating with U.S. Special Forces for more than a decade. All U.S. officers interviewed for this book who worked with the CTS remarked on how determined the force was to defend Iraq from IS.[58] Indeed, CTS soldiers overall advanced aggressively and defended tenaciously. In 2014, a CTS contingent that was outnumbered five to one and besieged at Bayji oil refinery heroically held its ground despite multiple IS overtures to hand it over in exchange for safe passage out of Bayji.[59] At Ramadi in 2014–15, CTS forces virtually unsupported stubbornly beat back IS assaults for sixteen months before reluctantly withdrawing.[60] In every major Iraqi operation against

IS, including the offensives on Fallujah, Ramadi, and Mosul, the CTS was the spearhead. This was the kind of determination necessary to match the Islamic State's high will to fight, though it took years to foster. The lesson for working with partner forces is that the United States can urge its partners forward in the short term with "carrots," but it must make a long-term investment—beyond developing proficiency in combat skills—if it wants to get them truly committed to the fight.

Generating Dependable Mass

Although IS built a reputation for defeating numerically superior adversaries, it has most often had equal or greater numbers when engaging its enemies. At Kobane in late 2014, as many as twelve thousand IS fighters outnumbered the YPG five or six to one while the SDF fought IS with even ratios overall at Baghuz, and the IS counterattacks of October–November 2018 in the Hajin pocket often outnumbered the SDF at the point of contact.[61] Indeed, IS has consistently defied intelligence assessments of its strength, with casualty rates at various battles exceeding maximum estimates by its foes.[62] Newly published research on captured IS documents suggest that in late 2016, the group had about sixty thousand members in Iraq alone,[63] at a time when U.S. officials claimed the coalition campaign against IS had already killed fifty thousand fighters.[64] Thus, IS was a force that could generate considerable mass for its military operations.

For its part, the coalition managed to mass sufficient force against IS, but its greatest challenge was applying—rather than generating—mass. Whatever the true number of IS fighters at Mosul in late 2016, the ISF and the coalition eventually assembled about 108,500 troops for the battle, complete with coalition air, artillery, and even limited ground accompaniment support.[65] Yet in the battle's early stages, most of these forces refused to advance into the city, and the only consistently dependable contingent comprised the approximately seven thousand CTS personnel deployed to Mosul.[66] Likewise, despite the rapid growth of the SDF to sixty thousand members,[67] it could mass no more than ten thousand and, in October 2018, as few as

one thousand fighters for the Hajin campaign because the SDF prioritized non-IS theaters of combat.[68] Hence, lack of will caused a persistent inability for coalition partners to create "dependable military mass," as military analyst Ben Connable put it in a 2020 RAND Corporation study.[69]

The lesson here is that good-quality partner forces can mass at a high proportion of their overall combat numbers, but that capability largely relies on determination and political will. The CTS, for example, never had an issue applying its mass, possessing such a high will to fight, though its small size relative to the rest of the ISF meant it could not provide the necessary mass alone.[70] As for political will, it took the fourteen months from October 2017 to December 2018 for the SDF to mass enough force for the Hajin campaign, because the senior leadership was preoccupied with countering Turkish aggression in northern Syria. IS did not experience significant massing problems, because it had the manpower, determination, and political will to field sufficient armies.

Identifying Talent

IS was proficient at recruiting talented individuals from around the globe. It made concerted efforts to attract educated and experienced members, as exemplified in its July 2014 call for "people with military, administrative, and service expertise, and medical doctors and engineers of all different specializations and fields."[71] Not only veteran jihadists from the Middle East, Afghanistan, and North Africa, but also people with university education, military experience, and specialized technical knowledge flocked to the banner of the caliphate.

The success of IS here poses a challenge to a key aspect of the "by, with, and through" concept—namely, that it "works only when the United States finds a partner with the potential to outperform the shared adversary."[72] Military analysts Mick Mulroy and Eric Oehlerich juxtapose the failure of the decade-long U.S. training of the ISF to be a "scalable mirror image of U.S. forces" against the success of providing the SDF with a short-term "tactical advantage" (air support and SOF assistance).[73] However, it is possible to

substantially increase the capabilities of a partner force if given the time to do so. For instance, the CTS was a product of close cooperation between Iraqi soldiers and U.S. Special Forces over a decade and it became far more capable than any other element of the ISF and was crucial to depriving IS of its territory in Iraq.

The lesson here is that perhaps the "by, with, and through" concept should not only rely on *finding* already talented partners but also invest in *creating* them. It would be a more demanding operational concept, involving recruitment and training as well as accompanying and supporting partners over a long period of time. Yet it would be well worth the investment, as it has been with the CTS, without which Iraq might have been unable to maintain its sovereignty after the IS campaigns of 2014. Also, over time, partner forces will learn to maintain high levels of proficiency with less U.S. support, as the CTS did after the 2011 U.S. withdrawal from Iraq.[74] This experience suggests it is important to keep in close contact with partners after a successful "by, with, and through" operation, with the implication that the United States should keep its relationships with the ISF and SDF.

The Importance of Maintaining Stable Relationships

Maintaining close relationships with partner forces is helpful not only for long-term proficiency but also for garnering trust, a prerequisite for "by, with, and through" operations.[75] The CTS was such a willing partner of the coalition because, as many U.S. SOF officers pointed out, the CTS had a strong relationship with U.S. Special Forces.[76] As the commander of U.S. Special Operations Command Central at the time Lt. Gen. Michael K. Nagata said, "I have very vivid memories of the reaction of the CTS after Mosul fell and I got the authorization to send our Special Operations Forces back to Iraq and the celebration in the Iraqi CTS headquarters was something to behold. What that did was it gave the CTS a level of confidence in fighting ISIS that the Iraqi Army was never able to achieve."[77] This high level of trust "made an already effective fighting force—the CTS—even better, in large part because they had confidence now."[78] At the same time, fluctuations in trust

can contribute to operational delays and security failures, like the October 2018 IS counterattacks on the SDF.

One lesson to learn from IS in this regard is the importance of keeping abreast of local political dynamics. An important aspect of IS effectiveness was its ability to coopt local populations, made easier by lack of a serious alternative to IS governance. One U.S. officer recalled that even during the Hajin campaign of 2018–19, residents of towns and villages formerly under IS control were reluctant to cooperate with the SDF and coalition for fear of IS retribution.[79] The 2013–14 Anbar tribal engagement campaign of IS was successful largely because no alternative existed to provide the support or security that the group could. This theme is prevalent in other jihadist campaigns, such as the cooperation by al-Qaeda in the Arabian Peninsula with rural Yemeni tribes that did not have links to government forces. The case of Wilayat Sinai is instructive because the Egyptian military had continuous—albeit transactional—relationships with the Bedouin tribes that helped preclude IS incursions. Hence, maintaining relations with partners even before or after a military campaign can help mitigate the threat of future major security challenges.

The Future of Jihadist Conventionalization and Policy Implications

There is no sign that IS or other jihadist groups will stop seeking to conventionalize and hold terrain. At this writing, IS affiliates control parts of Nigeria and until recently held territory in Mozambique. Wilayat Sinai briefly held several villages in July 2020. The core IS elements of Iraq and Syria continue waging insurgent and terrorist campaigns against various actors, attempting to build strength for a more opportune moment to take back the territories they lost. The *wilayat* of Libya, the Philippines, Afghanistan, and other countries continue their own efforts in those theaters, with tactics increasingly resembling those of the core organization, as demonstrated by Philippine jihadist groups with their SVBIED tactics.[80] Other Sunni jihadist groups, including Hayat Tahrir al-Sham, AQAP, al-Shabab, and the West

African al-Qaeda affiliate Jamaat Nusrat al-Islam wal-Muslimin, continue disputing territory and fighting off state armed forces on the battlefield. The Taliban has retaken all of Afghanistan. These groups' ideologies, as always, demand the implementation of sharia and the restoration, expansion, and defense of the Caliphate, an inherently territorial project that requires conventional warfare. Indeed, continued conventionalized jihadist operations should be expected.

As shown throughout this study, IS has developed a conventionalized jihadist way of war that others may seek to replicate when waging military campaigns. Its style depends on mobile fighter cadres with high levels of determination to conduct fast-paced assaults with combined infantry-SVBIED strikes. The IS theory of victory consists of shaping the battlefield beforehand through assassination, tribal engagement, and cooptation campaigns meant to demoralize an adversary, and then shattering the enemy's will to fight on the battlefield. Keeping the initiative is an important aspect of IS operational style since it allows the group to target its enemies at their most vulnerable points and more easily achieve surprise. On the defensive, IS loses the ability to shape its enemies and must rely mainly on SVBIED-led counterattacks to convince an adversary that pressing forward would be too costly, necessitating a highly determined attacker for successful assault. This relatively low-cost way of war—not reliant on expensive, high-maintenance heavy weapons or demanding combined arms tactics—will be attractive to any nonstate actor seeking to capture and hold territory, particularly jihadist groups. Ongoing jihadist conventionalization holds the following implications for U.S. policy:

Importance of long-term partnerships. It is imperative for the United States to have reliable partners when fighting conventionalized jihadist groups. When properly supported in seeking to adapt to conventional warfare, the ISF and SDF both proved up to the task of rolling back IS territorial gains, and the United States should maintain close relations with them to help them prepare for the next threat. The alternative would be a larger commitment

of U.S. forces akin to the 2001 invasion of Afghanistan or the 2004 battles of Fallujah. The high volume of hardened jihadist fighters—many with recent experience from the battle of Baghuz—and their families in SDF detention centers and displaced persons camps constitutes the most pressing matter on which U.S.-SDF cooperation can make a difference.[81] In Iraq, the continued U.S. SOF-CTS partnership should continue, and Iraqi and U.S. forces should keep in contact with the tribes that helped defeat IS, as well as engage with others to ensure they do not fall prey to a new malign threat. The Biden administration should see these efforts as part of its national security priority to "reinvigorate and modernize our alliances and partnerships around the world."[82]

Preventing conventionalized threats. Allowing jihadists to move to conventional warfare leads to far more costly, destructive fighting than terrorist or insurgent activity. At the same time, as one U.S. SOF officer remarked, "As you put on a uniform and say 'I own this piece of land,' they sealed their own fate. They're never going to win against us in a conventional-type battle."[83] Indeed, overwhelming U.S. conventional overmatch could make it tempting to wait for jihadists to conventionalize and then defeat them on a battlefield that is more fitting for U.S. military capabilities. However, this type of war would cause enormous damage. The wholesale destruction of cities (Mosul, Raqqa, Sirte, Marawi), mass loss of civilian life, and huge displacement of persons the IS war caused make the occasional terrorist attack or roadside bomb look almost negligible.

Instead, U.S. and partner forces should work to hamper jihadist conventionalization efforts so that they do not reach such a destructive point. These efforts require not only traditional counterterrorism and counterinsurgency measures like hardening soft targets, disrupting jihadist recruitment and financing networks, or breaking up terrorist cells but also broader efforts such as humanitarian relief and tribal engagement to address the underlying conditions that facilitated conventionalizing by IS. A central issue here is the high number of imprisoned jihadist fighters in both Iraq and Syria whose release or mass prison break could spur the same intensification of jihadist activity that followed IS prison breaks in 2013.

Leveraging U.S. technological overmatch. The Islamic State's conventional operations posed new challenges that even the U.S. military had difficulty countering. The United States should consider the disruptive innovative capabilities IS deployed as part of American future warfare preparations, for itself and its partners. There were no easy countermeasures for the mass use of SVBIEDs, small quadcopter drones, aggressive information warfare, and other features that characterized the IS style of conventional warfare. The United States should draw on its technological superiority to fill the gaps in its and its partners' capabilities to fight these new threats:

- Technology can address the significant threat of SVBIEDs on the battlefield. Development of rapidly deployable precision weapons can help target the harder-to-hit VBIEDs made by IS. For example, miniaturized loitering munitions (kamikaze drones), intended by the U.S. Army for use at the platoon level, could take on an infantry support role and quickly target incoming SVBIEDs.[84] Unmanned or robotic ground vehicles in urban combat settings can help seek and destroy SVBIEDs while protecting friendly human forces. Partner forces should also be able to arm such vehicles to serve as ground-based remote-controlled explosives to attack SVBIEDs. Additionally, U.S. forces can train partners to properly use mines and caltrops, or sharp metallic devices that puncture tires when the tires run over them, to bolster protection against SVBIEDs. On the low-tech side, U.S. advisors—perhaps through assigning specialized trainers—should help ensure the partners' internalizing of counter-SVBIED tactics learned in their battle doctrines, including backward-sweep clearances, road cratering, berm and barricade placement around friendly positions, targeting of missile production and launch facilities, integrated infantry antiarmor capabilities, and engagement of active SVBIEDs with armored construction vehicles (as a last-resort tactic).

- Precision weapons and weapons to counter unmanned aerial systems (UAS) can help mitigate the threat of enemy small drones. Indeed, IS introduced the use of small drones on the battlefield, and U.S. partner

forces could initially do little to counter them beyond firing on them with small arms. Anti-drone technologies, such as advanced jammers, can preclude small drone use. Limited U.S. deployment of jammers in the 2016–17 battle of Mosul effectively supported CTS advances but could cover only several kilometers at any time, not enough to have a significant battlefield impact.[85] Deploying small drones designed to hunt and disable other small drones is another solution. Emerging handheld UAS technology, including shoulder-launched small anti-drone rockets, nets, and disruptive energy beams, would also be positive additions to partner force capabilities.

- U.S. cyber capabilities[86] are growing and can help disrupt and destroy drones and online propaganda networks, akin to the 2016 coalition mass hacking of IS social media and digital content production.[87] On the battlefield, integrating cyber in a combined arms framework will help gather intelligence and disrupt IS communications and other computerized systems to facilitate partner ground operations. Effective deployment of cyberwarfare against jihadists will require streamlining the planning and execution of cyber operations to ensure they can support ground troops in real time.

- Emerging technologies like autonomous weapons and modern remote-controlled weapons systems could be useful against jihadists in urban warfare. Jihadists' extensive use of IED emplacements and SVBIEDs in the close quarters of urban terrain is a serious hindrance to any attacking force and a constant sap on morale. Forward deployment of robotic or remote-controlled weapons, even in small numbers, could help increase the confidence of advancing human units and reveal threats before they cause serious damage. For instance, autonomous vehicles could serve as bait for SVBIEDs or prematurely trigger an ambush.

These are expensive solutions, but well worth the investment if successful. Advanced technology has proven a vital asset in countering asymmetric

threats, such as the coalition's use of counter-drone systems, cyber operations, and, most importantly, advanced airpower. These are powerful capabilities that jihadist groups will likely never be able to match.

Jihadist conventionalization is here to stay, and it is up to the United States and its allies and partners to be prepared as the next threat emerges. Strong partnerships, robust prevention efforts, and U.S. and partners' technological overmatch of opponents will help ensure that the next jihadist group that tries to take and hold territory will fail faster and harder. IS showed that jihadists have an increasing propensity for conventional warfare and are more than prepared and willing to deploy it for their expansionist, apocalyptic aims. Now, the United States, its allies, and its partners must be ready to meet them.

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